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EDITORIALS[†]

"NATIONAL HEALTH CONFERENCE"

Interdepartmental Committee.—Among other by-products of the Social Security Act, a provision was enacted in 1935 for an Interdepartmental Committee, consisting of the assistant secretaries of the United States Treasury, Departments of the Interior, Agriculture and Labor, and the chairman of the Social Security Board. One of the early acts of the Interdepartmental Committee was to call a "National Health Conference," to which were invited representatives of the medical profession, allied groups and the public, to discuss public health and related problems, and to formulate principles and recommendations pertaining thereto.

* * *

Eight Hundred and Fifty Million Dollars, the Estimated Need.—Without going into detail, it suffices to state that this Presidential Committee—for that is the name given by the press to the National Health Conference endeavor—convened in Washington on July 17, and promptly recommended, as necessary for a national public health program, so massive a yearly sum as \$850,000,000 (eight hundred and fifty million dollars); half the amount to be allocated from federal sources, the other half to be supplied by state, county and local governments. According to this recommendation, the money so appropriated was to be utilized not only for general public health work as part of an extensive program, but in part, also, for medical care and hospitalization of needy citizens. It does not necessitate prolonged study or thought by physicians who have studied such experiments to make apparent the conclusion that such a program, if carried out, would, of course, soon drift into the sea of state medicine!

* * *

Opinions of President Roosevelt and Others. That the program outlined had the sponsorship of President Franklin D. Roosevelt may be inferred from his statement to the Conference that "millions of citizens lack the individual means to pay for adequate medical care," and that a "coordinated national program of action" was imperative.

[†] Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column which follows.

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Dr. Irvin Abell, president of the American Medical Association, at once called attention to the dangers of such a program, and the difficulties that must be encountered in devising a governmental plan adapted to widely different sections of the country. Dr. Hugh Cabot of the Mayo Clinic, on the other hand, in his espoused report, criticized the American Medical Association for not meeting its responsibilities. Similar statements were given by Mr. Lee Pressman, legal counsel for the CIO, who felt that the plan proposed should be kept "free of control by the hierarchy of medicine." Dr. Olin West, secretary of the American Medical Association, on the contrary, again emphasized the risks inherent in medical practice if that were to be under the domination of political forces such as exist in the United States, and Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, suggested that first efforts to alleviate human morbidity might better be directed in support of work that would do away with underlying poverty and deplorable social welfare conditions clearly causative factors in creating illnesses that might otherwise have been prevented.

* * *

California's Experience.—California is fortunate in that methods to overcome whatever deficiencies may exist are being tried out along constructive lines in Alameda and other counties. It will be of interest, therefore, to note what new federal and state legislation, if any, this recent "National Health Conference" will, after its labors, induce.

**PASSING OF JOSEPH P. WIDNEY, FOUNDER
OF THE LOS ANGELES COUNTY
MEDICAL ASSOCIATION**

To have lived to the ripe old age of 97, with a mind keen and alert up to its last hours, despite such physical handicaps as a frail body and practical blindness, is an experience that has not often come to human beings. Yet such was the life* of Dr. Joseph Pomeroy Widney, whose death took place at Los Angeles on July 4, 1938.

Doctor Widney, it will be recalled, was the motivating spirit in the founders group which organized the Los Angeles County Medical Association on January 31, 1871, some sixty-seven years ago, and he—who in recent years was the oldest living graduate of the University of California (having received his M. D. degree from Toland Medical College in 1866)—also founded the College of Medicine of the University of Southern California in the year 1885. Later, in the financial panic of the nineties, he resigned as dean of the University of Southern California Medical Department in order to take over the responsibility of saving the University of Southern California at a time when its properties were about to be levied on by the courts; guaranteeing with his personal resources

* Biographical sketches of the late Dr. Joseph Pomeroy Widney appeared in CALIFORNIA AND WESTERN MEDICINE in the following issues: Vol. 44, No. 4, April, 1936, page 292; Vol. 44, No. 5, May, 1936, page 396; Vol. 46, No. 6, June, 1937, page 398.

as he assumed the presidency the payment of the claims pending against the institution.

Born in Ohio in 1841, so far back that he recalled a childhood amid the wigwams of Indians, a soldier in the War Between the States and an assistant surgeon in Indian campaigns in Arizona, while successful as a physician in private practice in Los Angeles, he became the founder of a county medical society that is today one of the largest in the United States. He was also founder and dean of a medical school, and president and protector and saviour of the University of Southern California in its early days of life and death struggle. As a civic worker he had a broad and far-seeing vision of railroad, harbor and other developments, on a massive scale, for the southern section of California. Also minister of the gospel, and founder of a settlement house, and devotee of the gospel work, author of volumes of historical and other essays,† including a large two-volume "Race Life of the Aryan Peoples," he proved himself a kindly philosopher, with a mind richly stored with knowledge of the past, and ever alert and inquiring as to the significance of current changes and events. Dr. Joseph Pomeroy Widney's life was indeed such as is granted to but few men to enjoy.

And so, once more, a great man has been gathered to his fathers.

The following two essays, "Why Is Death?" and "Heaven," both written by Doctor Widney a few days before his death, are here printed as an *In Memoriam* to a beloved physician, whose name the California Medical Association may well place on its honor roll, and for all time to come:

WHY IS DEATH?*

Across the pathway of life, and apparently bringing it to an end, is Death, and from the earliest antiquity men have been asking the question, "Why death at all?" "Does it serve any useful purpose in the Drama of Life?" The answer is Yes, without death the drama of life would be a failure. The purpose of that drama is—The Making of a Man: not simply for time, but for eternity. That making is what has been called Evolution. Through all the years of his life man has been growing. It is the law of evolution, that is, of growth. The planet grows. It is first a gaseous nebula. It then becomes a habitable world. The man's body through which he works is a necessary attendant upon that life. A man may will that a brick shall place itself at a certain point in a wall which he is building—it does not obey. But he may will that hand to take that brick and put it into its proper place. It is matter acting upon matter through the use of matter. It is so in all phenomena of life. The subtle and intangible will of the spirit has acted upon matter. But, in this circuitous way, man realizes that he is hampered and restricted in his work.

Man is restricted in his knowledge of the world about him. He had thought that the seven prismatic colors were all. By using the chemical paper, he now knows there is an infra-red and an ultra-violet which he does not see. It is so in every department of human inquiry. It is so in the pitch, in the low and the high notes in music, and it is so in all the broad field of strange, intangible rays of power and light that come to us from the universe about us.

Shall man be stopped in his intellectual evolution by the limited range of the possibilities of further investigations in

† Doctor Widney was the author of the following volumes: "Race Life of the Aryan Peoples," "The Lure of the Land," "Three Americas," "A Greater Los Angeles," "A New Europe," "A New Orient," "Studies of Other Worlds."

* This essay was dictated by Dr. Joseph P. Widney on June 29, 1938, his death occurring five days later, on July 4, 1938.

the universe about him, because of the material limitations of the body through which, in this life, he must work? There is no escape from these limitations unless he is released from the body which defines them. This is why Death! Death is simply *release* that men may go on.

This is what every religion tries to explain. Man set free from the shackles that impede his progress that he may go on. It is not a calamity. It is a blessing in disguise. It is like the blessing of toil placed upon primitive man that he might work and progress.

The idle man in Paradise had failed. The man who went out from Eden to toil with the briars and brambles of a fertile earth that he might have food succeeded.

But the time comes when a man, even with all his achievements, reaches the limit. He can go no farther in a lifetime. Is his progress to cease? Death in this life has answered the question. Death is not a calamity! Man may still go on; Death may be the sum total of his experiences. It is the greatest blessing to man that God has made. Die—and go on!

Is this death to be all or does Eternity hold other deaths yet to come?

We deem that this life is not all, but is only one stage in the evolution of man upon earth. Eternal life upon this planet is withheld from man. The story is thus told in Genesis III, Verses 22, 23, 24.

(22) *"And the Lord God said, Behold, the man is become as one of us, to know good and evil: and now, lest he put forth his hand and take also of the tree of life, and eat, and live forever:*

(23) *"Therefore the Lord God sent him forth from the garden of Eden, to till the ground from whence he was taken.*

(24) *"So he drove out the man: and he placed at the East of the Garden of Eden Cherubim, and a flaming sword which turned every way, to guard the way of the tree of life."*

Eternal life upon earth—do we realize what it would mean? The body grows old—it has worn out its material envelope. Age, and a life properly lived, brings with it maturity. After maturity there follows decay.

HEAVEN[†]

Heaven—What is it?—When?—Where?

What conclusion must we draw from the many beliefs of the ancient and modern writers? Only one conclusion will be possible, that we are mistaken utterly in the meaning of the word Heaven. Everywhere in the Universe we find the law of eternal growth and eternal deterioration. It seems to be the same in every department of the Universe—material, intellectual, and spiritual. The pleasures of heaven lie in the thought:

I, too, am a sharer in the development of the worlds about me, a sharer with God, therefore forever sharing in the mind of the Supreme Maker of the Law. Was this not the deeper meaning of the word spoken by the Supreme Ruler—when discussing the future of man upon earth, "*He will become as one of us—knowing good and evil*"? The thought is, if in this lower sphere man should eat of the tree of life and live and gain eternal life, would it be death to his soul?

Life as we know it upon this plane is to be lived by successive births and consequent deaths; the soul progressing and developing in accordance with the fixed and unchanging law spoken in the beginning.

ROENTGENOLOGY, PATHOLOGY AND ANESTHESIOLOGY IN HOSPITALS

Growth of the Hospital System in the United States.—Problems in policy that are not vexatious are usually easily solved. By contrast, an example of a vexatious proposition, presented during the last few years at each annual session of the American Medical Association, is that dealing with the status of physicians specializing in

[†] This essay, dictated on the succeeding day, June 30, 1938, was given to his secretary, with the words, "This is my last chapter."

pathology, roentgenology and anesthesia, and relating to their work in hospitals. The confusion has arisen because, in part, the standardization rules for hospitals, as laid down within the last decade or so by both the Council on Medical Education and Hospitals of the American Medical Association and the American College of Surgeons, have not only stressed the importance of hospitals maintaining high standards in these three specialties, but have practically denied to institutions not properly staffed therein places on the lists of Accredited and Approved Hospitals. That fact, with the trend within the medical profession itself not only to utilize hospital facilities for patients for a larger number of diseases and surgical conditions than in prior periods, but to send patients to the institutions almost at the onset of certain medical or surgical conditions, has resulted in the education of the public and their understanding that patients undergoing hospitalization should have the right to expect a high type of roentgenologic, pathologic and anesthesia service as part of routine hospital régime. It is not to be wondered at, therefore, that surface differences of opinion between some hospital administrators and physicians devoting themselves to the above specialties should have arisen.

* * *

The Ten Principles Enunciated by the American Medical Association.—At the 1934 American Medical Association annual session, its House of Delegates enunciated ten principles that have been generally accepted by the constituent state medical associations. This year, at San Francisco, additional representations on the subject were made by delegates from California, Massachusetts and other states, and by action duly taken. Paragraph 4 of these ten pronouncements was amplified by the addition of the following clarifying statement:

"If for any reason it is found desirable or necessary to include special medical services such as anesthesia, radiology, pathology or medical services provided by out-patient departments, these services may be included only on the condition that specified cash payments be made by the hospitalization organization directly to the subscribers for the cost of the services."

* * *

California Medical Association Is in Accord. The action so taken at the recent June session of the American Medical Association is in line with similar motions previously adopted by the constituted authorities of the California Medical Association. The attention of hospitals, and of hospitalization groups, and of physicians generally is directed to this amplification of the ten American Medical Association principles as a rule for their guidance. Back of all the discussion are two important facts: first, that roentgenologists, pathologists and anesthetists are members of the medical profession, with all the rights and privileges possessed by their fellow physicians in general practice or other specialties; and, secondly, that no corporation shall practice medicine, this latter rule

meaning, in law, that none other than a graduate physician, duly licensed, shall have the legal right to practice medicine. When these two principles are kept inviolate, there can be little basis for difference of opinion.

CONCERNING LEGAL RIGHT FOR COUNTY HOSPITAL CHARGES

Recent County Hospital Articles in the Official Journal.—CALIFORNIA AND WESTERN MEDICINE, for several months past, has printed a number of articles concerning bills for hospitalization services rendered to supposedly indigent patients who had been admitted to county hospitals for treatment. The legal right of county boards of supervisors, under certain conditions, to make such charges was questioned. A perusal of the articles referred to,* and particularly of several legal opinions therein, will indicate the lines along which exceptions were taken, particularly in relation to charges rendered to patients by the Los Angeles County General Hospital. However, the points of view to which expression was given by our friends in the legal profession in the comments referred to were not concurred in by the legal advisors of the Board of Supervisors (the County Counsel's Department of Los Angeles County); and, recently, a formal opinion was rendered by that County's Counsel in which it was stated practically that according to the law of California, county boards of supervisors have the legal right to charge all citizens for hospitalization at such rates as the supervisors may lay down, and without regard to whether the citizens receiving such care are indigents, near-indigents, or nonindigents.

* * *

Opinion of the Legal Counsel of the California Medical Association.—A copy of this County Counsel's opinion was sent to the legal counsel of the California Medical Association, Mr. Hartley Peart, with request for his informal judgment and his reply is printed on page 157 of this issue.

This later opinion is commended to the thoughtful perusal of members of the Association, and particularly to the members of county medical society committees on county hospitals. The issues involved are of great importance to California physicians, for the reason that enforcement of procedures recommended or sustained by the legal advisors to county boards of supervisors (especially if such opinions be in error) could result in great damage to public health interests and medical practice. It is to be remembered that boards of supervisors should abide by the opinions of their duly authorized legal advisors, because when public officials fail to follow the advice of their duly constituted legal advisors they do so at risk to themselves and their bondsmen. However, the mere fact that a county counsel, or one of his deputies, presents a legal opinion does not make such an opinion sound law.

* References referred to appear in a footnote in CALIFORNIA AND WESTERN MEDICINE, February, 1938, on page 74.

One of the functions of courts is to decide what is and what is not the law: yet, until an official legal opinion is reversed in the courts, such an opinion is assumed to be the law. In the matter here referred to, one attorney, who happens to be a legal advisor of a board of supervisors, has rendered his opinion to such a board. In this issue will be found the opinion of another attorney—in this instance the legal advisor of the California Medical Association—who holds contrariwise to that of a county counsel. The points brought out by the legal counsel of the California Medical Association, Mr. Peart, are worthy of careful thought, and should be read by all physicians who are interested in the issues involved.

AN ILLUMINATING MAP

Adequacy and Inadequacy of Medical Care. During the last several years much has been written concerning "The Adequacy of Medical Care." When criticisms stressing the "Inadequacy" of Medical Care (as propounded by sociologic and other propagandists) are analyzed, it is often found that the seeming deficiencies in medical service, as they exist in the minds of writers of such articles, are based on what might be termed thought confusion, in that the critics demanded, among other idealistic provisions, as a fundamental requirement of adequacy, the existence of hospitalization and associated facilities for every part of the United States, paying little regard to such important matters as population and economic and sociologic conditions, and geographic and other environments.

Disparaging statements concerning the methods of present-day medical practice are not confined, however, to lay sources; because even within the profession a certain number of physicians seem to have been so carried off their feet in adulation of group and hospital practice that they also have become exponents, both orally and in writing, of similar thought-trends favorable to change in the practice of medicine.

* * *

The Map Is Worthy of Study.—This being unfortunately the case, a study of the black and white map, printed on pages 258 and 259 in the July 16, 1938, issue of the *Journal of the American Medical Association*, and showing the distribution of hospitals in the United States, is respectfully commended for all dissenters. The map shows that hospitalization facilities exist within thirty miles of places of residence of 98.5 per cent of the citizens of the United States! A distribution of hospitals such as that, in turn, necessarily means there is a supply of physicians in the districts sufficient to maintain such hospitals. Certainly when such figures are considered in relation to basic implications concerning facilities for medical care have we not a right to be surprised when we hear sociologic reformers and allied supporters prating about "inadequacy" of modern-day medical facilities? Readers who have not scanned the map referred to, and also the editorial comments as given on page 257 of the *Journal of the Ameri-*

can Medical Association, should take time for such study, keeping in mind the topography and other conditions of the Great American Desert, the Western Plains and the Continental Divide, in which are located most of the sparsely hospitalized areas marked on the map by solid black.

"HUMANE DOG POUND" INITIATIVE WILL BE ON THE GENERAL ELECTION BALLOT ON NOVEMBER 8

The words, "Humane Dog Pound," as they will appear on the ballots for a proposed initiative law that will have a place at the general election on November 8 sound euphonious to most ears, even though, as a matter of fact, the law, if enacted, when actually analyzed, will be found nothing else than another "antivivisection" measure.

Certain facts, therefore, should be kept in mind, to wit:

For a number of years, at annual and, later, at biennial sessions of the California Legislature, proposed laws have been submitted by the "Antivivisectionists," and in each recurring battle proponents of the measures have gone down to defeat.

The last engagement of forces is yet remembered by those who were "at the front," not forgetting the "battles of the blondes."

Presumably, from these previous experiences, the California proponents of such measures have come to the conclusion that it were best to try quite a different mode of attack. In this decision they are supposedly aided by "foundations," "bequests" and other extra-state sources; and, as a result, in this year, 1938, the voting citizens of California, on their November 8 general election ballots, will have brought to their direct attention, as one of the initiatives to be voted upon, the

"Humane Dog Pound Law!"

Elsewhere in this issue (on page 172) appear other comments on this subject. Members of the Association who are interested—and every member of the California Medical Association, without exception, has abundant right to be interested—should feel free to write for literature and other information to the California Society for the Promotion of Medical Research, 369 Pine Street, San Francisco.

That organization is bearing the brunt of the fight against this objectionable measure; in our opinion, so decidedly *inhumane* to both human beings and animals. And remember, also, that to promote the work of that organization—the California Society for the Promotion of Medical Research—it would be in order to apply for membership. Here is one place for action where it will be splendid to be a "joiner"!

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 154.

EDITORIAL COMMENT[†]

SURGICAL TREATMENT OF HYPERTENSION

Since 1923, when Danielopolu¹ first suggested the surgical resection of the splanchnic nerves for the reduction of heightened blood pressure, there have been a number of procedures advocated by various observers that might be justifiably applied in malignant hypertension, in view of the fact that the condition is inevitably fatal. Direct denervation of the suprarenal glands,² suprarenalectomy,³ denervation of the kidney, and spinal-root resection,⁴ have all been practiced with alleged symptomatic improvement.

The mechanism of the hypertensive state has always been one for speculation, and it is only recently that the various known physiologic facts connected with this condition have been ably assembled.⁵ According to Weiss, it should be remembered that: (1) Vasomotor tonus in hypertension is normal and is superimposed on an intrinsic arteriolar spasm. (2) Arteriolar spasm is not due to an increased secretion of adrenalin nor is it neurogenic in origin. (3) The nature of the change in the arteries and arterioles is unknown. (4) The increased diastolic and systolic pressures are secondary manifestations, and may be looked upon only as a compensatory mechanism to preserve an adequate capillary circulation in the tissues.

It has been shown by Prinzmetal and Wilson⁶ that the increased vascular resistance is not confined to the splanchnic area, but is generalized throughout the systemic circulation. Two other facts which also militate against a sympathetic origin of hypertension are: (1) Paralysis of the sympathetic ganglia by novocain infiltration produces no greater increase in blood flow in hypertensive than in normal individuals, as evidenced by sympathetic vasodilatation in an extremity, a test commonly used; and (2) it is well known that total exclusion of sympathetic control of the blood vessels in animals produces no lasting fall in blood pressure. These facts would seem to indicate no excessive activity of the sympathetic nervous system, which is the usual criterion for sympathectomy.

[†]This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

¹Danielopolu, D., quoted by Pereira, A.: *Nervi Splanchnici*, Tipografia Porto Medico, Portugal, 1929.

²Crile, G. W.: Indications and Contra-Indications for Denervation of Adrenal Glands, *Ann. Surg.*, 100:667-669, 1934.

³DeCourcy, Carroll, and DeCourcy, J. L.: Essential Hypertension with Treatment by Bilateral Subtotal Adrenalectomy, *Am. J. Surg.*, 25:324-326, 1934.

⁴Adson, A. W., and Brown, G. E.: Malignant Hypertension: Report of Case Treated by Bilateral Section of Anterior Spinal Nerve Roots from the Sixth Thoracic to the Second Lumbar, Inclusive, *J. A. M. A.*, 102:1115-1118, 1934.

⁵Weiss, Soma: Recent Advances in the Treatment of Hypertension, *M. Clin. North America*, 19:1343, 1936.

⁶Prinzmetal, Byron, and Wilson, C.: The Nature of the Peripheral Resistance in Arterial Hypertension, with Special Reference to the Vasomotor System, *J. Clin. Investigation*, 15:63, 1936.

On the other hand, it is recognized that individuals suffering with hypertension show abnormal pressor responses to cold and emotion, and the work of Peet,⁷ Heuer,⁸ and Adson⁹ has shown that sympathectomy may cause some reduction in blood pressure in certain favorable cases of malignant hypertension.

It is thus readily seen that the basis for surgical intervention is not particularly simple or easy to explain. Experience in the clinics, where series of patients have been carefully studied, does not indicate that a remission, much less a cure, may be encountered in any but a very small number of cases. It is more than likely that the beneficial effects reported are purely subjective accounts of the patients' reactions, since clinical tests have shown but mild and inconstant reduction in blood pressure, only slight increase in kidney function, and little or no ability to return to a useful occupation. As James White¹⁰ has so well described the situation, "the whole matter of surgical intervention in severe hypertension is still so much in its infancy that it is impossible to form any final judgment about the surgical procedures described to date." Although investigation has to progress through justified and intelligent trial and error, it would seem reasonable at this time to expect further experimental work in the field of neurophysiology before any definite contribution to the treatment of essential hypertension is made.

1930 Wilshire Boulevard.

LEO J. ADELSTEIN,
Los Angeles.

ACQUIRED LESIONS OF THE TRICUSPID VALVE

The frequent presence of relative tricuspid insufficiency in advanced congestive cardiac failure is in striking contrast to the rare occurrence of organic disease of the tricuspid valve.

Relative tricuspid insufficiency is nearly always manifested by an increased pressure and systolic pulsations in the peripheral veins, the magnitude of such pulsations being considered an indication of the degree of valvular insufficiency. In many cases similar pulsations are demonstrable in the liver, which is enlarged under such circumstances. Systolic hepatic pulsations may be demonstrated either by direct palpation or with the aid of hepatic pulse tracings. One may or may not hear a systolic murmur localized over the lower sternum or xiphoid. If present, it is often indistinguishable from a similar murmur audible at the apex due to mitral insufficiency.

Relative incompetency of the tricuspid valve occurs so commonly with right ventricular dilata-

tion in marked degrees of congestive failure that it receives little comment at the autopsy table. Nevertheless its presence, from the clinical point of view, is important as indicative of serious myocardial weakness and an overburdened right ventricle; in which instances considerable temporary relief may be given the patient by venesection.

Although relative tricuspid insufficiency may occur in myocardial failure due to many causes, organic tricuspid disease is most commonly the result of rheumatic endocarditis. In acquired tricuspid valvular lesions, insufficiency and stenosis are always coexistent to some extent, although the former is most frequently the predominant lesion. Organic tricuspid regurgitation is difficult to distinguish from a relative insufficiency, except that the latter and its peripheral manifestations may disappear with a return of improved myocardial function.

Acquired tricuspid stenosis rarely occurs unassociated with other valvular lesions. Its almost invariable association with mitral stenosis complicates its detection, so that it is rarely diagnosed antemortem. In fact, of the 252 cases of tricuspid stenosis reported in the world literature up to the present time, only thirty-two have been correctly diagnosed prior to autopsy. This should not discourage attempts to demonstrate its presence, if suspected, since, if present to a sufficient degree, it may produce signs and symptoms that are diagnostic.

Patients with tricuspid stenosis are practically always dyspneic on exertion. There is cyanosis of varying degree, often marked. The cervical and brachial veins are distended with presystolic pulsations or large "a" waves, demonstrable in the jugular pulse tracings. In some instances, combined inspection of the apex beat and jugular pulse may show the exaggerated wave to be synchronous with contraction of the auricles, even without the aid of instruments. The liver is usually markedly enlarged and tender, with auricular (presystolic) and ventricular (systolic) pulsations detectable either by palpation or with the aid of hepatic pulse tracings. Double hepatic pulsations may be explained on the basis of an hypertrophied right auricle contracting against an obstruction to the ejection of blood into the right ventricle, followed by a retrograde statis wave as a result of ventricular contraction. The most valuable and most significant clinical sign of tricuspid stenosis is the presence of auricular and ventricular pulsations in the liver. Upon the cessation of auricular activity during such arrhythmias as auricular arrest (sinus pauses), auricular fibrillation, nodal rhythm, or nodal tachycardia, the auricular pulse wave in the liver disappears, but the ventricular wave (systolic) persists.

Because the murmurs due to the frequently associated mitral stenosis are of greater amplitude, it may be impossible to detect auscultatory signs attributable to tricuspid stenosis. Nevertheless, in some instances it has been possible to demonstrate a diastolic or presystolic murmur over the xiphoid

⁷ Peet, M. M.: Splanchnic Section for Hypertension: A Preliminary Report, *Univ. Hosp. Bull.*, Ann. Arbor, Mich., 1:17, 1935.

⁸ Heuer, G. J.: Anterior Spinal Nerve Root Section: A Surgical Treatment of Essential Hypertension, *Ann. Surg.*, 102:1073, 1935.

⁹ Adson, A. W., Craig, W. McK., and Brown, G. E.: Surgery in Its Relation to Hypertension, *Surg., Gynec., and Obst.*, 62:314, 1936.

¹⁰ White, J. C.: *The Autonomic Nervous System*, 263. The Macmillan Company, New York, 1935.

end of the sternum differing in quality and sometimes, although not necessarily, in timing, from a similar murmur at the apical region due to associated mitral stenosis. Confirmatory evidence of such auscultatory findings may be secured with the aid of simultaneous electrocardiograms and electrophonocardiograms.

Finally, fluoroscopic studies may show enlargement of the heart to the right, with dilatation or hypertrophy of the right auricle and pulsations in the superior vena cava. Such findings would certainly be considered corroborative.

384 Post Street.

RICHARD D. FRIEDLANDER,
San Francisco.

DIPHYLLOBOTRIUM LARVAE IN TROUT OF CALIFORNIA WATERS*

Occurrence of different *Diphyllobothriidae* has been recorded from various Eastern States of the Union. This communication deals with observations of Plerocercoids of this group in the boundaries of California. The first case concerns a privately owned lake in the Tahoe region, the second a lake in Lassen National Park. In both cases Eastern brook trout have been found afflicted. It is quite likely infections of trout by similar Plerocercoids may occur in other waters of California.

The infections were severe and often fatal to fish. Fingerlings, as well as trouts, weighing over a pound, have been killed off. The afflicted fish were less shy, swimming on or near the surface of the water before they died. There was generally no emaciation. Opened and placed in a dish of clear water, a varying and often great number of Plerocercoids could be seen emerging from the body cavity. Once liberated, the *Diphyllobothrium* larvae were swimming for some time with the alertness of leeches. The semitransparent body was elongated, ribbon-like, and slightly rounded on both ends. Placed in alcohol they assumed a saturated white color and a conical shape. Their size has been reduced by this procedure to about a third of the body length observed during life. Most of the larvae, however, remained embedded under or in between serous membranes of the intestines. Part of the Plerocercoids has been seen resting coiled in hairpin forms, others creeping extended and surrounded by large extravasates of blood. Some larvae appeared very minute, apparently having just passed the stage of the Procercoïd. Highest numbers of parasites occurred regularly in the wall of the stomach, while decreasing numbers were found in the lower intestines, liver, kidney, and peritoneum. No larvae have been encountered under the skin or in deeper parts of the muscles of the body. This localization, as well as the more delicate shape of the body, makes a differentiation of these Plerocercoids from those of *Diphyllobothrium latum* possible. It is generally admitted that even adult stages of this group are sometimes difficult to classify. This is, of course, to a higher degree

true in regard to larval stages. No proliferation of the Plerocercoids has been seen.

Fuhrmann¹ seems to believe that *Diphyllobothrium* larvae multiply by agamic proliferation, a fact which the writer has not been able to confirm in observations on his unusual large material of *Diphyllobothrium latum* collected in the Balticum. The writer, on the contrary, could demonstrate² that the increasing numbers of Plerocercoids found in larger predatory fish result from preying on smaller fish and on spawn, the latter being often infested with Plerocercoids. In other words, the more severe infections regularly observed in larger fish result from development of Procercoïds after intake of primary hosts (Copepods) and, secondly, from ingestion of Plerocercoids (by preying on smaller fish and on spawn). Trout is a predatory fish, and it is quite likely the infections described above may have resulted from similar sources. This would especially explain the high incidence of Plerocercoids encountered in the wall of the stomach of these fishes. A big trout needs something more substantial as food, as there is a small copepod or a fly larva, especially if even this food is scarce by artificially filling up lakes with trout without due regard to food supply.

The species of *Diphyllobothrium* involved could not be established, because sickness necessitated a return to San Francisco. The studies will be continued during this year. The observations are certainly a problem for the State Fish and Game Commission, which is eager to provide a large and healthy trout population of lakes and streams. It may also be of some concern to health authorities because several species of *Diphyllobothrium* found in the United States of America thrive in animals as well as in man.

I do not know if it is not out of place to recommend to sportsmen working in medical fields not to throw intestines of fish in water or on shore, thus providing opportunities for spread of parasitic diseases, but to burn them. If anglers could be induced by these lines to make the test mentioned above for presence of Plerocercoids (to place the opened fish in a pan of water), this would not only enlarge our knowledge of regional distribution of these *Diphyllobothriidae* in California, but it would possibly be to their personal benefit.

The Medical Center.

M. HOBMAIER,
San Francisco.

¹ Birkeland, I. W.: Bothriocephalus Anemia, Medicine, 11:1-13, 1932.

² Hobmaier, M.: Wie kommt die Infektion der Raubfische mit dem Plerocercoid von *Dibothriocephalus latum* zustande? Centralbl. f. Bakteriol., 2 Abt., Orig., 72:268-273, 1927.

The required methods of work are no secret; for they have been employed by thinking individuals ever since the time of Socrates. Here one cannot build without laying foundations. One cannot, for example, be a radio expert without the principles of electricity. One cannot be a business expert without economics. One cannot be an engineer without getting a knowledge of mathematics. Thus it runs throughout the cycle of subjects. Successful work is a kind of development; so before going far one must master its preliminary and prerequisite stages. There is no other valid way. One cannot build a tower without first laying a solid foundation.

* From the George Williams Hooper Foundation, University of California, San Francisco.

ORIGINAL ARTICLES

ANESTHESIA IN EUROPE*

By WILLIAM LEROY GARTH, M.D.
San Diego

GENERALLY speaking, anesthesia in Europe lags considerably behind anesthesia in this country. But just as life over there is most interesting where most primitive, so anesthetic and surgical practices are to the greatest degree interesting perhaps, where they vary most from our own.

The first stop on my anesthesia tour of Europe was at Florence, Italy. There I had no introductions to surgeons or anesthetists, so inquired at my pension for the best surgeon in Florence. I was directed to a Doctor Storii, and went at once to see him. His offices were across from the Duomo, or Cathedral, in the heart of Florence, and occupied the entire ground floor of an old residence. This building had been palatial in aspect at one time, but now appeared somewhat dingy with age and long use. After waiting awhile, I was admitted to the consulting room, an enormous place, which fairly swallowed Doctor Storii and his nurse in its vastness. To my great disappointment, I found that Doctor Storii spoke no English; but fortunately his wife, a charming person who spoke English fluently, happened to be in the building and came to my rescue. It was soon arranged that I should watch the doctor work on the morrow.

The following morning I got up bright and early, but by the time I had managed to find some breakfast and get to the hospital, it was 8:30 and Doctor Storii had started operating at 8 o'clock. To my surprise I found that he was already operating on the third patient, two appendectomies having been completed. Presently, the fourth patient was sent for, and two orderlies came marching in with him in their arms, dumping him rather unceremoniously on the table. The anesthetist pounced on him at once, clamping the mask over his face and starting to pour ether, at the same time directing that the patient count, following his own count. After about five minutes the patient stopped counting, and the incision was made. Occasionally a patient moved or grunted when the incision was made, but, surprisingly enough, most of them seemed well enough anesthetized for the work at hand, which consisted of a series of appendectomies using the McBurney incision. Thinking it over afterward, I wondered if they were using a little ethyl chlorid or chloroform in addition to ether, but probably not, as I believe that I should have detected it by the odor. All over Europe, I noted that ether was dispensed in refillable bottles, instead of in the manufacturers' cans, as in this country.

Only 60 to 150 cubic centimeters of ether was used for these patients, partly because the operations were so short, averaging only twelve minutes, and partly because of the considerable degree of rebreathing practiced. The mask was covered with

rubber, except for a small area about 2 or 3 centimeters in diameter, where the fresh ether was added. This rubber covering ballooned out more or less with each exhalation, thus acting as a sort of a rebreathing bag.

Another feature of Italian operating-room practice that interested me immensely was the cotton gloves worn by the entire surgical team. Doctor Storii, himself, had regular surgical gloves on under the cotton, but the assistant and the surgical nurse wore heavy elbow-length rubber gloves, such as are worn for dishwashing in this country. When I asked the reason for wearing the cotton gloves, one of the nurses, who spoke English, told me that it was because rubber gloves alone were considered too slippery. However, my guess is that they used cotton gloves before they had any rubber ones, and have never been weaned away from the cotton. In fact, one of the nurses, whose duty seemed to be the handling of reserve instruments, wore no rubber gloves at all, only cotton.

I found that in Italy most of the anesthetics at the large public hospitals are given by nurses and only a few by internes. In private practice they are all administered by physicians, usually by one of the surgeon's assistants, who alternately assists and gives anesthetics.

VIENNA

Finsterer's Clinic was my first objective in Vienna, since I was anxious to see a demonstration of splanchnic anesthesia. Finsterer uses the anterior approach, starting with a field block of the abdominal wall, then making a midline incision. His next step is gently to insert several long slender retractors, and a minimum amount of packing, so that a narrow channel is provided leading down to the region of the first lumbar vertebra. He then inserts a trocar, 25 centimeters long, which is tipped with a retractable needle, 2.5 centimeters in length, and makes the injection. About 20 cubic centimeters of 0.5 per cent procain is injected to the left of the body of the vertebra, and 70 cubic centimeters on the right. Almost immediately the patient relaxes in comfort and Doctor Finsterer proceeds with the operation. The patient's general condition remains surprisingly good throughout the long operation, and he shows signs of discomfort again only while the incision is being closed.

With modifications, then, such as the use of pentothal during the induction of the splanchnic block, it seems we might, perhaps, do well to follow Doctor Finsterer in our handling of this type of case. Using splanchnic anesthesia, Doctor Finsterer does extensive gastric resections with a mortality of only 4 per cent. Of course, this is not by any means due entirely to an improved anesthetic method. Doctor Finsterer's slow and careful work is that of an artist. He uses innumerable fine sutures, seemingly not pulled up at all snugly. Surprisingly enough, the aseptic technique at Doctor Finsterer's Clinic did not seem particularly good. The crowd of spectators were not required to wear caps, let alone masks, and the clean-up of the room between cases seemed cursory, to say the least. Here again, as in Italy, they wore cotton gloves over the rubber, perhaps with the idea of protecting and

* Chairman's Address, Anesthesiology Section of the California Medical Association, at the sixty-seventh annual session, Pasadena, May 9-12, 1938.

preserving the rubber gloves. The poverty of the country was reflected in the equipment, everything being old and dingy looking, probably most of it having been in use for the past twenty years or so, since the World War.

VIENNA—RUBOLS SPITAL

Eunarcon, an intravenous barbituric acid preparation, was being used at Werner's Clinic for most of the work. This drug seems to be somewhat slower in acting than are evipal and pentothal, so that one dose often sufficed for an operation lasting 20 to 30 minutes. This, of course, is a disadvantage from the standpoint of safety, since it makes for poor control of the patient, it being much easier to give a serious over-dose of the drug. A few case reports will illustrate this point.

The first patient, a middle-aged female, scheduled for a total hysterectomy, was given 4 cubic centimeters of eunarcon in one dose. She seemed well anesthetized for a few minutes; but Doctor Werner soon began to complain of the lack of relaxation, and supplementary ether had to be given. During the delay, Doctor Werner lost his disposition in German, and I got the impression that the anesthetist was getting the usual ribbing for not having provided the proper degree of anesthesia, with no delays. The patient became quite cyanotic, as anesthesia advanced, and seemed to need an airway, but none was used.

The second patient, a woman weighing only about 110 pounds, was given enough eunarcon in one dose to cause her to stop breathing very promptly. After a minute or so, chest pressure was applied a few times, and she resumed breathing spontaneously. The operation, a vaginal hysterectomy, was started immediately. The needle was left in the vein, and at the end of fifteen minutes another 2 cubic centimeters of eunarcon solution was injected, and the needle withdrawn. This seemed to be a precautionary measure, since the patient had as yet shown no signs of waking up. At the end of twenty-five minutes Doctor Werner completed the operation. A part of his technique was to split the uterus longitudinally in the course of removing it, and this in some way seemed to facilitate matters very greatly.

In Austria, the surgeon's assistants alternate as anesthetists. In private practice, I was informed, nitrous oxide is used frequently for minor operations, but the use of ethyl chlorid, followed by ether, is the standard method. At Finsterer's Clinic, for example, ether is used for a large portion of the work, the splanchnic anesthetic being reserved for the long, hard, gastro-intestinal procedures.

ZURICH, SWITZERLAND

At Zurich I had bad luck, in a way, since there was very little surgery to be done at the "Canton Spital" the day I arrived. Doctor Petri, the resident in surgery, spoke English fluently, however, which assured me of an interesting morning. He first showed me several gas machines of which he was quite proud. One of these was actually equipped with a built-in absorber, the only one I saw in Europe, outside of England. Then he rather shame-facedly admitted that most of the anesthetists in

Switzerland are given by nurses. In fact, the lack of skilled medical anesthetists in Switzerland is such that they had recently had to send all the way to England for an anesthetist to give chloroform to one of the Maharajahs of India, who had refused to be operated on except with a chloroform anesthetic. Nitrous oxid is used frequently at the "Canton Spital," but no ethylene or cyclopropane is available. As a result, the gas must very often be supplemented by ether.

In their surgery, they use a sort of mitten made of cotton, over the rubber gloves. This left the thumb and fingers free, which did away with the argument in Italy that the cotton gloves were worn because the rubber is too slippery. The only function I could see for this type of glove was that it very neatly bridged the gap between the gown and the glove.

MUNICH, GERMANY

At the University Hospital in Munich all of the anesthetics were given by physicians; unfortunately, however, not by persons specializing in anesthesia. In fact, the only place in Europe where I found medical specialists in anesthesia was in England.

The first patient was given a high caudal block for an Alexander suspension. Seventy cubic centimeters of $\frac{3}{4}$ per cent tutocain was used, and the anesthesia obtained seemed entirely satisfactory. However, Doctor Mallow, the resident, admitted that they had about 10 per cent of failures to get such a high anesthetic effect with the method. One private patient was given nitrous oxid for a dilatation and curettage, but it was supplemented with ether, and the benefits of the gas were thus largely lost. The rest of the patients operated on that morning were given an ethyl chlorid induction, followed by a semiclosed ether anesthetic. Much more than the usual amount of rebreathing was provided for by a special mask, equipped with a rebreathing bag, and a tube for administering oxygen. The oxygen was measured by bubbling it through a flow bottle, filled with water. Through the good oxygenation thus provided, they seemed to get remarkable results with this simple apparatus.

An interesting thing about the surgical technique at Werner's Clinic was that the instruments were kept in pans of antiseptic solution instead of on instrument tables. After having been used, they were put back into the pans of solution, just as in this country they would be returned to the tray. It is interesting to speculate as to whether this custom might actually be a hold-over from the days of Listerian surgery.

HEIDELBERG

The next stop on my anesthesia tour of Europe was at Heidelberg. I was disappointed to find that Doctor Kirschner was away on his vacation, and that they had absolutely nothing scheduled, since they were only taking care of emergencies in his absence. I found that spinal percaid was being used very extensively at Heidelberg for operations on the lower extremities, and that narkogen, an intravenous barbituric acid prepara-

tion, was being applied increasingly for short operations of all kinds.

For laparotomies, avertin basal anesthesia, supplemented by ether, was the method of choice, but ethyl chlorid induction, followed by ether, was still being made use of for a considerable proportion of the work.

WIESBADEN—THE STADT KRANKENHAUS

Avertin is the anesthetic of choice at Kleinschmidt's Clinic. I saw only one operation there, an open reduction of a shoulder, for which 100 milligrams of avertin had been given. Anesthesia was incomplete, so it was supplemented by ether. When the patient's tongue dropped back, the anesthetist seized it with a grasping forceps, not even trying an airway first, which was understandable, as the airway provided was too short and straight to be of much use. When an instrument dropped on the floor, it was boiled only a minute or so, then cooled in an antiseptic solution and put back on the tray.

Doctor Kleinschmidt seemed badly spoiled by both nurses and assistants, who kowtowed to him in grand style. He bullied all of them in a pleasant manner, and, strangely enough, was very careless in the use of suture material, making no attempt to economize in its use. He seemed a real personage, and I was only sorry that my poor German and my lack of time kept me from getting to know him better.

PARIS—HÔTEL-DIEU

Ether, given by a semiclosed method, is the principal anesthetic used at Hôtel-Dieu. A mask, equipped with a sort of rebreathing bag, is used, and extensive rebreathing is practiced. The patients seemed quite blue; but since the operating room was fitted with blue glass windows, it was impossible to tell how much was due to cyanosis and how much was the reflection of the blue light. It did not occur to me at the time what a dangerous combination this was—the blue glass and the questionable anesthetic method. But, in thinking it over afterward, I came to the conclusion that most of the patients operated on there would probably do better with a great deal more oxygen than they were allowed to have.

The surgeons at Hôtel-Dieu wore the great, thick, elbow-length gloves seen at so many clinics in Europe; but in spite of this they seemed to get their work done promptly and efficiently.

Later in the morning I rushed over to the great Salpêtrière Hospital, but arrived too late to see any surgery. Upon inquiring, I was informed that ether is still the principal anesthetic agent used at the Salpêtrière.

LONDON

My first visit in London was to the old Westminster Hospital, across from Westminster Abbey. The hospital has the patina of age, appearing to belong to about the same period as the Abbey, further enlarged by the sixteenth century. Inside, however, it is fairly well modernized, and I found Doctor Nosworthy, to whom I had an introduction from Wm. V. Chalmers-Francis of Los Angeles,

using a modern McKesson gas machine and the carbon dioxid absorption technique.

His first patient was a man aged 61, scheduled for a cholecystectomy. I was late, and the patient had been intubated when I arrived. Doctor Nosworthy was giving him nitrous oxid-oxygen and ether, and carrying him lightly—to conserve his strength. The operation was progressing quite slowly because of adhesions, but the patient's condition was entirely satisfactory. About an hour later the blood pressure began to fall, and Doctor Nosworthy administered 500 cubic centimeters of glucose intravenously. When the operation was finished, at the end of the second hour, the patient left the table, apparently in very good condition.

The next patient was a husky young workman of twenty, to be operated on for an undescended testicle. Doctor Nosworthy gave him nitrous oxid-oxygen and ether, having considerable difficulty with the induction, as we all do at times when handling this type of patient. I could not help thinking how much Doctor Nosworthy might enjoy handling the same patient with ethylene or cyclopropane, and not being obliged to use ether.

The third patient was a woman of forty-five, in for the reduction of a Colles' fracture. Doctor Nosworthy gave her 5 cubic centimeters of 10 per cent pentothal, which seemed the right dose of the right agent, so perfect was the result. Again I wondered if it was the relative weakness of nitrous oxid as an anesthetic agent that has helped cause the rush toward intravenous anesthesia in England and the Scandinavian countries.

LONDON—ST. THOMAS HOSPITAL

A few days later I watched Doctor Nosworthy work at St. Thomas Hospital. When I arrived, they were well along on a pelvic laparotomy under gas-ether anesthesia. Doctor Nosworthy had shut off his absorber, and increased the flow of gas and oxygen to about ninety gallons per hour, because of the patient's greatly increased respiratory rate, which had run up to sixty per minute, in spite of the use of fresh soda lime. We soon came to the conclusion that this might have been due to over-etherization, since about four ounces had been used, or it might have been due to the fact that the obese patient had been too long in deep Trendelenburg position. Doctor Nosworthy had been using the carbon dioxid absorption technique for a few months only, and said he still had a tendency to forsake it, and go back to his old ways whenever any difficulty arose.

Several other patients at St. Thomas' that afternoon were given pentothal with strikingly satisfactory results, and Doctor Nosworthy admitted that he was using it increasingly in place of gas for minor operations. After the surgery was finished, tea was served in the physician's dressing room, and a pleasant social hour was enjoyed.

My next introduction was to Dr. Ronald Jarmen, one of the foremost anesthetists in London. He works chiefly for "Mr." Abel, one of London's leading surgeons. Their first patient was to have a sympathectomy for a cervical rib. Doctor Jarmen uses pentothal induction for most of his

patients, so this patient was given 5 cubic centimeters of 10 per cent pentothal rather rapidly, and she promptly stopped breathing. Doctor Jarman then endeavored to intubate her, but was unsuccessful, because of laryngeal spasm. He then tried to insufflate the lungs with oxygen by means of bag pressure, still with no result. Doctor Abel, the surgeon, finally interfered to the extent of applying pressure to the chest a few times, after which the patient began to breathe again. Nitrous oxid was then started and the operation finished without further difficulty.

Doctor Abel's second patient was a large, florid male, scheduled for an appendectomy. Doctor Jarman gave him 3 cubic centimeters of pentothal in his room, and another 3 cubic centimeters when he reached the surgery. He followed this with nitrous oxid-oxygen, plus a small quantity of ether, with partial rebreathing. Because the pentothal had greatly lowered the metabolic rate, little carbon dioxide was being produced, and I was amazed to see how much rebreathing it was possible to use, in spite of the fact that the machine was not equipped with an absorber.

Another day I went with Doctor Jarman to a nursing home, where Doctor Abel was to operate. This nursing home was a remodeled residence, as I understand most of them are, and was hardly the place for important major surgery. However, it is an old British custom to take care of the private patients under these adverse conditions, and now that world conditions are so chaotic there seems little hope of a change in the situation in the near future.

On this day, the patient was a woman of 63, scheduled for a resection of a portion of the colon for a carcinoma. Her hemoglobin was only 50 per cent, in spite of the fact that she had had a transfusion on the previous day, so she was to receive intravenous fluid throughout the operation, and was to have another transfusion that afternoon. Doctor Jarman gave her 3 cubic centimeters of 10 per cent pentothal in her room, followed with a percain spinal block in the surgery. The administration of the percain was quite dramatic, since the patient had been thoroughly relaxed by the pentothal, and had to be supported in a sitting posture by two nurses while the spinal tap was made. As soon as she was in position on the table nitrous oxid-oxygen was started, and the operation begun. An hour later, when I was forced to leave, Doctor Abel was well along with the operation, and was removing a large mass, along with a portion of the colon, in the region of the splenic flexure. I heard from Doctor Jarman recently, and he said that the patient had made an uneventful recovery, having had the colostomy closed some time ago, and being again capable of normal activities.

IN CONCLUSION

In conclusion, I should say that anesthesia on the Continent has lagged considerably behind anesthesia in our own country. Perhaps because gas and gas machines were so expensive, their use did not spread on the Continent during the post-war years, as in England and the United States.

Even when the carbon dioxide absorption method was developed, and the cost of gas became a negligible item, the widespread dependence on ether continued. Recently, however, a large number of Continental clinics have been using intravenous anesthesia extensively, not only for minor and short operations, but for all kinds of surgery. I am convinced that this is an unhealthy development, comparable to the wave of enthusiasm for spinal anesthesia that swept this country only a short ten years ago. However, it may be that they are really setting the pace for us, rather than going off at a tangent as it now appears.

In England the picture is very different. Anesthesia there was never turned over to technicians, as in our country, so their personnel set-up is much better than our own—physicians giving all of the anesthetics, and professional anesthesia having been a recognized specialty for generations. As a result, they have been the leaders in the art of anesthesia. However, their ingrained conservatism is such that they have fallen behind in the present forward surge of anesthesia progress. I understand that chloroform is still used fairly frequently, even to the extent of being the anesthetic of choice at many places in the outlying districts. They failed to accept ethylene when it was brought out by Luckhardt in 1923, and are now just as staunchly refusing to try cyclopropane. However, the carbon dioxide absorption method has finally found favor over there, and is being rapidly taken up by the more progressive men. With this necessary preliminary step taken I predict that in England they will soon join the procession, and give cyclopropane a trial.

1252 Third Avenue.

CONSERVATIVE RENAL SURGERY WITH PARTICULAR REFERENCE TO KIDNEY TRAUMA*

By LLOYD E. KINDALL, M.D.
Oakland

WITH the trend toward conservative renal surgery, I wish to present to you a brief résumé of ten recent cases of kidney trauma, emphasizing the following points in their management:

1. Every traumatized kidney requires absolute bed rest.
2. The amount of pain complained of by the patient does not determine the severity of the kidney injury.
3. The severity of the body injury does not determine the severity of the kidney trauma.
4. Intravenous urography is invaluable in the diagnosis of kidney trauma, and it should be done as soon as possible after injury.
5. Conservative surgery should be practiced in every case. A safe rule to follow is to explore every kidney where there is a gross hematuria

* Chairman's address, Urology Section of the California Medical Association, at the sixty-seventh annual session, Pasadena, May 9-12, 1938.

From the Urological Service of Alameda County Hospital, Oakland.

lasting over twenty-four hours, and more especially in that case in which pyelograms show either intra- or extracapsular extravasation of the sodium or iodine salt.

REPORT OF CASES

CASE 1.—O. G., male, age 19. Had been drinking. While driving a car, he ran into a lamp-post and was thrown out of the car. This caused a severe body injury. He was temporarily unconscious, but soon recovered, and was taken to the Alameda County Emergency at 8:25 p. m. and put to bed. The next morning he passed bloody urine and complained of severe pain in the right kidney region.

Intravenous Urography.—Showed incomplete filling of the calices, but the pelvis appeared normal; there was no break in the renal parenchyma.

Course.—There was no gross hematuria, but the urine contained microscopic red blood cells. The pain in the flank had subsided.

Three days later retrograde pyelograms were normal, and the patient's urine was normal.

The patient was kept in bed for fourteen days and then discharged.

COMMENT

This was a severe body injury, which caused gross haematuria and severe pain in the kidney region. These two symptoms both subsided in twenty-four hours. The intravenous pyelograms were negative. The patient recovered with bed-rest.

CASE 2.—W. R., a male, age 21. Was in a motorcycle accident, but did not remember the details. He was brought to the Emergency Hospital, in shock, at 2:15 a. m. His blood pressure was 70/54; he complained of pain in the back, and was in shock; his left flank was tender; the first urination was bloody. At 9:00 a. m., his blood pressure was 112/64; there was contusion, spasticity, and bulging of the left lumbar region.

Intravenous Urography.—Showed the transverse processes of the first, second, third and fourth lumbar vertebrae on the left, pulled off and displaced laterally. The right kidney was normal. On the left there was some evidence of function, but no definite outline of pelvis or calices. The diagnosis was ruptured kidney. The patient was given glucose, and was taken to the surgery.

Surgery.—Revealed marked perirenal hemorrhage; the kidney was badly contused and showed numerous areas of infarction, and it was torn at the hilum, probably destroying most of the blood supply. Nephrectomy was done, followed by one blood transfusion. The patient recovered.

COMMENT

This was a severe body injury, which caused severe trauma to the kidney, as demonstrated by the gross hematuria and the intravenous urograms. This patient was operated upon in less than twelve hours and, at surgery, the kidney was found to be so damaged that nephrectomy was necessary. Delay and observation, in this case, would have caused much blood loss. I feel that this case was properly managed, and that the surgery was conservative.

CASE 3.—E. T., a male, age 12. Was riding a bicycle along a cliff, when he suddenly rode over the cliff and fell twenty feet. This resulted in a severe injury. He was brought to the Emergency Hospital in mild shock. His clavicle and wrist were fractured. He was suffering from abrasions. He complained of pain in the left costovertebral angle and left abdomen. His urine showed fifteen to thirty red blood cells to the H. D. F.

Next day the patient had pain in the left upper quadrant and his abdomen was distended. A Payne tube was inserted

into his stomach, and much gas was removed, but his abdomen continued paining.

Intravenous Urography.—On the second day showed an apparently normal right kidney. There was some filling of the left kidney, but the pelvis and calices were not clearly outlined. The diagnosis was probable traumatized kidney. The urine continued to have microscopic red blood cells for a few days only. The patient was treated conservatively because the bleeding was only microscopic in character, and the pain gradually subsided. He was discharged eighteen days after entry.

COMMENT

This patient received a severe injury which caused pain in the kidney region, but the trauma to the kidney was slight, as evidenced by microscopic red-blood cells only in the urine. The intravenous urograms were not conclusive, because they were made on the second day after injury, when the abdomen was distended with gas. If intravenous urograms had been taken shortly after injury they would have given us much more information. The patient recovered with bed-rest.

CASE 4.—A. S., a male, age 41. Was struck by an automobile while crossing the street. Upon admission to the Emergency Hospital his hemoglobin was 76 per cent; his red blood count was 4,300,000; his urine was grossly bloody; there was a palpable mass in his left abdomen; his abdomen was distended, and his general condition was poor.

X-rays taken upon admission showed fractures of the fourth, fifth, sixth, seventh, eighth, ninth, tenth and eleventh ribs on the left, in midscapular line. The kidneys were not visible.

X-rays of the lungs, taken three days later, showed a generalized haziness of the left chest, due to edema and hemorrhage into the lung, with a pneumonic process developing in the base of the right lung.

On the fourth day the patient's hemoglobin was 60 per cent; his red blood count was 3,425,000; he had a well developed pneumonia, and his condition was poor.

On the fifth day the hematuria stopped, and the urine contained only a few microscopic red blood cells. During this time the patient was too sick to be moved to x-ray for intravenous urography.

Cystoscopy done on the thirty-ninth day, with retrograde pyelograms, showed normal kidneys, with no evidence of injury. Two days later the patient was discharged as well.

COMMENT

This case demonstrates a very severe body injury, with an injury to the kidney severe enough to cause gross hematuria lasting five days. However, retrograde pyelograms, taken thirty-nine days after injury, showed normal kidneys, with no evidence of rupture. Intravenous urograms could not be made because of the patient's poor condition. It seems to me that a patient who recovers from eight fractured ribs, a hemorrhage into one lung, and a pneumonia in the other lung, is entitled to escape with normal kidneys.

CASE 5.—W. A., a male, age 20. Was in an automobile accident, and was thrown against the side of the rumble seat, injuring his right flank. He was brought into the hospital unconscious and in shock. There was rigidity of both upper quadrants and marked tenderness of the right flank. His urine was grossly bloody. After recovering consciousness, the patient had severe pain in the right kidney region.

Intravenous Urography.—The next morning showed a normal left kidney; the right kidney showed torsion and appeared opposite the third and fourth lumbar vertebrae; the right major and minor calices were not well demonstrated; this indicated perirenal hemorrhage, with displace-



Fig. 1



Fig. 2

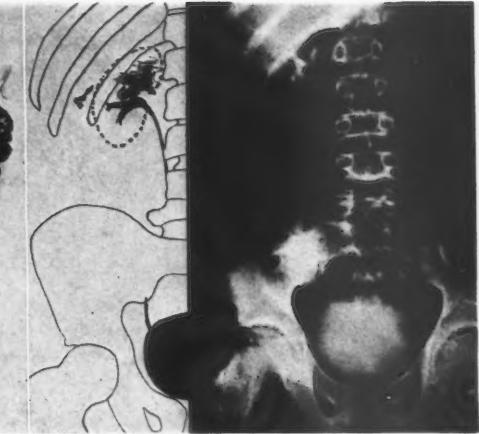


Fig. 3

Fig. 1.—Retrograde pyelogram showing extravasation of the sodium iodide in the lower pole. There was continual bleeding from the left kidney.

Fig. 2.—Demonstrates extensive ruptures of the kidney which were not demonstrated with retrograde pyelograms. Intravenous urography would probably have demonstrated more of the ruptures. (See Figure 1.)

Fig. 3.—Intravenous urogram illustrating intracapsular extravasation of the iodine salt in the upper pole, and also extracapsular extravasation.

ment of the kidney downward. On this same day, the urine showed microscopic blood cells only. The patient's general condition was good; there was some tenderness in his right flank.

Retrograde pyelograms taken four days later showed the right kidney in abnormal position, with the right ureter displaced medially. There were shadows of extravasation into the kidney parenchyma opposite the upper minor calyx.

Ten days later the right kidney could not be palpated; there was no tenderness and no symptoms; the urine was negative. The patient was discharged to his home for bedrest.

COMMENT

This case demonstrates a severe body injury which caused marked kidney pain and immediate gross hematuria; but the hematuria stopped within twenty-four hours. The intravenous urograms which were taken indicated perirenal hemorrhage, pushing the kidney downward, but showed no evidence of intracapsular rupture. This patient was treated conservatively because the hemorrhage stopped within twenty-four hours.

CASE 6.—E. U., a female, age 16. Was in an automobile accident, in which she was thrown forcibly onto the limb of a tree from a car, injuring her right side. She complained of severe pain in her right lower ribs and in the right lower quadrant; there was marked guarding over her entire abdomen; she vomited several times; her pulse was 100; her urine was smoky, and there were thirty to forty red blood cells to the H. D. F.

Two days later the patient still had pain in her abdomen and right flank; there was a slight elevation in temperature; her urine was grossly bloody at times; at other times there were only microscopic red blood cells. During this period the patient was under observation in the surgical department of the hospital.

Five days after admission the patient had no complaints; her urine was clear; her condition excellent.

Seven days after admission the patient passed bright red blood. Next day she was transferred to the G. U. Service. She had no complaints, but there was tenderness and rigidity of the right abdomen. Cystoscopy was done that night, revealing a blood clot at the right ureteral opening; there was bloody urine from the right kidney, and more pain in the right flank, with marked tenderness and rigidity at the right costovertebral angle.

Surgery disclosed two large ruptures at the lower pole, with a general maceration of the lower half of the kidney. Nephrectomy was done. The patient was given two blood transfusions.

COMMENT

This patient was treated conservatively for eight days before being transferred to urological service. With the history of intermittent hematuria and marked pain in the right kidney region for eight days, and with cystoscopy revealing blood clots at the right ureteral opening, surgery was definitely indicated. At operation, the kidney was found to be so extensively damaged that nephrectomy was necessary. This case demonstrates a severe body injury, with such severe kidney damage that, had it been turned over to the urological department upon admission, an intravenous urography would have been done, and surgery would not have been delayed so long.

CASE 7.—C. K., a female, age 27. Fell off a horse three days before admission to the hospital, injuring her left side, and had had a constant total hematuria. Upon admission to the hospital, her blood pressure was 105/75, her pulse was 56, and she looked pale. There was a marked tenderness at the left costovertebral angle. Her hemoglobin was 70 per cent; her red blood count was 4,180,000; white blood count 20,600; polymorphonuclears 65 per cent.

Intravenous Urography was done upon admission (three days after injury), with the following conclusions: Right kidney, normal pelvis and calices; left kidney: "There is nothing in these films diagnostic of rupture of the left kidney; there is definite diminution in the excretion of this side; there is absence of filling of the calices on the left, except for a small amount in the superior calyx, which may possibly be slightly farther away from the pelvis than one would expect from comparison with the other side."

Exploratory Operation.—Revealed a rupture at the anterior aspect of the left kidney near the hilus; this was cleansed of clotted blood and filled with a piece of fat; the edges of the kidney were approximated with mattress sutures. Following surgery, the patient was given two blood transfusions.

Cystoscopy, twenty-six days later. Dye was excreted from both kidneys in five minutes, both normal density;

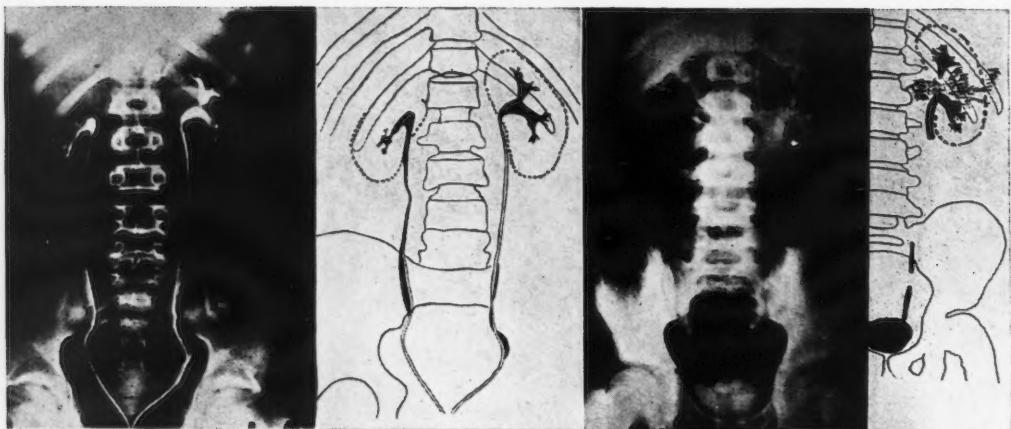


Fig. 4

Fig. 4.—Retrograde pyelogram demonstrating the lower pole of kidney following surgical repair of the upper pole. The function of this lower pole is very good. This patient is now working and is free of symptoms.

Fig. 5.—Intravenous urogram, twenty-four hours after injury, demonstrating both intra- and extracapsular extravasation of iodide salt.

retrograde pyelograms showed normal kidneys in normal position, with nothing to suggest rupture of the left kidney. The patient was discharged as cured.

COMMENT

This case demonstrates a severe body injury and a severe kidney injury, with no pain. There had been constant total hematuria for three days. Commenting on the x-ray report of the intravenous urograms taken three days after injury (the report reads: "There is nothing in these films diagnostic of rupture of the left kidney; there is definite diminution in the excretion of this side; there is absence of filling of the calices on the left, etc."), I feel that, in many cases where there is a tear in the renal parenchyma extending into the kidney drainage system, causing total hematuria, the iodine salt excreted in the kidney will be carried down the drainage system with the blood too rapidly to give a satisfactory urogram. This is one case in which intravenous urograms failed. Surgical repair of the lacerated kidney saved the kidney, as evidenced by normal function and by pyelograms taken twenty-six days after surgery.

CASE 8.—P. B., a male, age 17. Was hit by an automobile while riding a motorcycle. This was a severe body injury. He was in shock when brought to Emergency, had pain in his left flank, and gross hematuria. He was given sedatives and placed under observation.

Cystoscopy was done next day, and a left ureteral catheter was left in situ for drainage. Retrograde pyelograms showed extravasation of the sodium iodide into the lower pole. (Fig. 1.)

The second day there was marked rigidity of the left flank and gross hematuria.

The third day surgery was done, with the hope that sutures could be placed in the lower pole to control bleeding. (Fig. 2.) There was a large area of rupture in the mid-portion of one side of the kidney, extending into the renal pelvis for a distance of 5 centimeters, which almost severed the lower pole. On the opposite side, there were two linear rupture lines measuring 3 centimeters and 2 centimeters in length, approximately in the mid-portion of the kidney. There were several infarcted areas in the lower pole.

Nephrectomy was done, followed by two blood transfusions.

COMMENT

This patient had a severe body injury, with severe kidney damage; the pain was constant and severe; gross hematuria was constant; the retrograde pyelograms showed extravasation of the sodium iodide solution in the parenchyma of the lower pole. However, the patient was treated conservatively; but when the gross hematuria persisted after forty-eight hours, an exploratory operation was done, with the hope that a mattress suture could be placed through the lower pole to control bleeding. The kidney was found to be damaged beyond repair and had to be removed. I feel that intravenous urograms would have given us much more information, and surgery would not have been delayed so long.

1 1 1

CASE 9.—S. L., a male, age 14. Fell on a curb, striking his right side, and had immediate pain in his right flank. This was a mild body injury. When brought to the Emergency Hospital he had gross hematuria and marked tenderness of the right flank extending from the costovertebral angle to the right lower quadrant. The patient did not look ill. His general condition was good.

Intravenous Urography.—Was done next day, which demonstrated both intra- and extracapsular extravasation of the iodine salt. The patient's urine was still grossly bloody. This second day the patient's urine was still bloody, there was more pain in the right flank, and his pulse rate was going up.

Surgery.—Disclosed much perirenal bleeding; the upper pole of the kidney was badly contused, and there was a split of about 4 centimeters in its long diameter, parallel to the axis of the kidney. After separating the clots in the rupture of the upper pole, an upper branch of the renal artery was found spouting at the pedicle, and it was ligated. The rupture was sutured with ribbon gut, in the expectation that the upper pole of the kidney would atrophy. The patient was given four blood transfusions at intervals thereafter.

Follow-up.—This patient ran a moderate fever for six weeks. An exploratory operation was done after twenty-eight days, revealing a nodular upper pole, but no pus. The patient was in the hospital for fifty-six days. (Fig. 4.)

COMMENT

This case demonstrates a slight body injury and a severe kidney injury. The patient should have

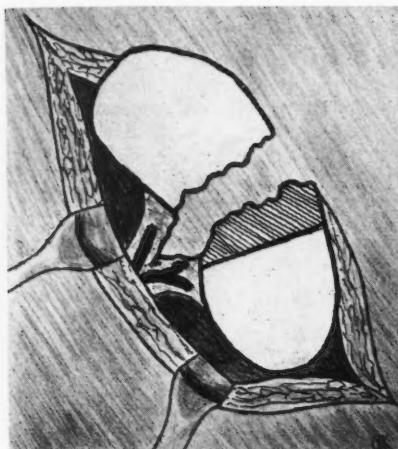


Fig. 6



Fig. 7

Fig. 6.—Sketch made of kidney as demonstrated at surgery. (See Figure 5.) Note complete transverse rupture extending through kidney pelvis. The shaded area in the lower pole represents the area of infarction which was removed. The kidney was then sutured with ribbon catgut.

Fig. 7.—Retrograde pyelogram (See Figures 5 and 6) made seven months after surgical repair. Note the connection between the minor calices of the upper and lower poles. The function of this kidney is normal; there is no infection; there are no symptoms of pain or discomfort.

been operated upon the first day, instead of the second day after admission. There would have been less blood loss. Also, if the upper pole had been removed at the time of surgery, the exploratory second operation and the long course of fever might have been prevented. This prolonged fever was probably due to absorption of the necrotic upper pole, which had lost its blood supply. The patient still has the lower pole of the kidney, which has excellent function. He has no symptoms.

• • •

CASE 10.—B. H., a female, age 9. Fell on the concrete curbing, striking her left side. This was not a severe body injury. She was taken to the Emergency Hospital with a pain in her left flank, and gross hematuria. She did not look sick.

Intravenous Urograms were made the first day following admission. (Fig. 5.) The patient still had gross hematuria. She was in good condition.

The second day following admission there was still gross hematuria.

Intravenous Urography was repeated, and surgery was done that evening. (Fig. 6.) There was much perirenal hemorrhage. After separating the fatty capsule, first the lower half and then the upper half of the kidney was brought out through the incision, the kidney being ruptured transversely across the center, dividing the pelvis and part of the pedicle. In the mesial end of the lower half of the kidney there was an infarcted area of about three-fourths of an inch in width that was grayish-white in color. This was removed with a scalpel. The upper and lower poles were then sutured together. The patient was given two blood transfusions. Thirty-seven days after surgery the sinus was healed.

Pyelograms were taken one week after the sinus was healed. Follow-up retrograde pyelograms were taken seven months after repair surgery was done. (Fig. 7.)

COMMENT

This patient demonstrates a mild body injury, with severe kidney trauma. Gross hematuria was constant, but the patient complained of very little pain. She should have been operated upon the first, instead of the second day following injury, because the urograms showed both extra- and intracapsular rupture. This case demonstrates

what can be done surgically with some of these ruptured kidneys where a pole of the kidney has been severed, and intravenous urography has demonstrated the function of the injured kidney. In this instance we knew that the upper and the lower poles functioned normally before surgery. Is the seven months after follow-up pyelogram made too early to determine the future function of this kidney? At the present time, the patient is free of symptoms, the kidney function is normal, the urine is free of pus cells, and the culture of the urine is sterile.

• • •

DISCUSSION

I have recommended no type of operation nor the use of any type of suture.

I have made no attempt to classify kidney ruptures, nor would I attempt to classify or enumerate any of the various signs and symptoms. I have, however, briefly described the management of ten cases.

I have described to you cases in which all symptoms subsided and the gross hematuria stopped within twenty-four hours.

I have described cases of severe body injury, accompanied by severe pain, in which there was only mild trauma to the kidney.

I have also described to you the type of injury which is characterized clinically by a gross hematuria lasting over twenty-four hours, initial shock, with a fall in blood pressure, increased pulse rate, etc., where the usual conservative treatment is generally advised, namely: rest, sedatives, frequent examinations of the blood count and blood pressure, and x-ray examinations, until the patient becomes weak from loss of blood.

I have described to you two cases of mild body injury in which severe kidney damage was done, where the patient had very few clinical symptoms, except gross hematuria.

What, then, is the best procedure to follow in these cases where gross hematuria persists after twenty-four hours?

Many experiments have been made on the kidneys of various animals, under various conditions, which are illuminating, but which, I feel, do not have any direct bearing on human kidneys, as I have shown that the severity of the body injury does not determine the severity of the kidney injury. Sufficient data is not available to tell us what eventually happens to these traumatized kidneys which are left to repair themselves, nor what happens to those which are repaired surgically.

I am of the opinion that intravenous urography is the most important deciding factor in determining the extent of kidney damage and the consequent management of the individual case. This should be done as soon as possible, because delay allows more gas to form in the intestinal tract in the cases of severe injury where there is perirenal bleeding. The shadow of this gas on the x-ray films may interfere with the reading of the intravenous urograms. If an intravenous urography is unsuccessful at first, it should be repeated or combined with retrograde pyelograms. Either intravenous or retrograde pyelograms taken alone may be unsuccessful. Intravenous urography will generally give us an outline of the ureters and bladder; and, should the ureter or bladder be ruptured, the extravasation of the dye can, as a rule, be readily detected. Intravenous urography will also tell us if the patient has a normal kidney on the unaffected side, the assurance of which gives a comfortable feeling when operating on an injured kidney.

To repeat what I stated above, conservative surgery should be practiced in every case. A safe rule to follow is to explore every kidney that has a gross hematuria lasting over twenty-four hours, and more especially in that case in which intravenous or retrograde pyelograms show either intra- or extracapsular extravasation of the dye. I feel that this is conservative surgery. While it is true that some pathological kidneys are more apt to rupture following injury than a normal kidney, we can assume for all practical purposes that the injury has taken place on a normal kidney (as was the fact in these ten cases which I have cited), which makes the exposure of the kidney an easy matter. It is not like operating on infected kidneys, for example, which are densely bound down with adhesions. The injured kidney can generally be brought out well into the incision and explored, and repair can be done easily. In some of these cases we delayed unnecessarily too long with surgery, requiring, in some instances, two or more blood transfusions to make up for the loss of blood. The hemoglobin and red blood cell count will not give an estimation as to the amount of blood loss until some twenty-four hours after bleeding, when the blood stream will then have had time to take in fluids to make up for the blood loss.

CONCLUSIONS

1. In every case of trauma to the kidney, the patient should be kept at absolute bed rest, and

intravenous urography should be done as soon as possible.

2. Do not depend upon pain as a measure of the extent of kidney damage.

3. Gross hematuria, accompanied by little or no pain, does not necessarily mean slight kidney trauma.

4. In every kidney injury where gross hematuria persists after twenty-four hours, an exploratory operation should be seriously considered. In a case where there is gross hematuria following injury, and intravenous urograms show rupture, surgery becomes imperative if that gross hematuria lasts over twenty-four hours. That is what I mean by conservative surgery in kidney trauma.

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TUBERCULOUS TRACHEOBRONCHITIS: A REVIEW*

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AND

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DISCUSSION by John C. Jones, M.D., Los Angeles; Sidney J. Shipman, M.D., San Francisco.

MUCOSAL tuberculosis of the trachea and bronchi needs emphasis as an important and relatively frequent complication of pulmonary tuberculosis. Eloesser¹ has contributed greatly to our knowledge of this subject. Experience with more than one hundred cases of tuberculous tracheo-bronchitis has convinced us that this condition often may be serious. In the group of patients showing advanced ulcerative and stenotic lesions, there has been a mortality of approximately 50 per cent regardless of the type of treatment that was used for the pulmonary tuberculosis.

INCIDENCE

A recent study² was made of 272 patients with adult pulmonary tuberculosis who were admitted to a sanatorium. Active or healed tuberculous lesions were found bronchoscopically in thirty (11 per cent). In twenty-four of the thirty the presence of bronchial pathology was suspected prior to bronchoscopy because of symptoms and roentgenographic changes. Mucosal disease was found in many patients whose pulmonary tuberculosis was of relatively short duration. There was no evidence that the use of active collapse therapy favored the development of mucosal lesions.

BRONCHOSCOPY

Bronchoscopy³ should always be used to confirm a suggestive diagnosis, and is contraindicated only by laryngeal ulceration, tuberculous pneumonia, and severe hemoptysis. Skill in passing the instrument is essential. Mucosal lesions result from contact with bacillary sputum.⁴ In its early stages the dis-

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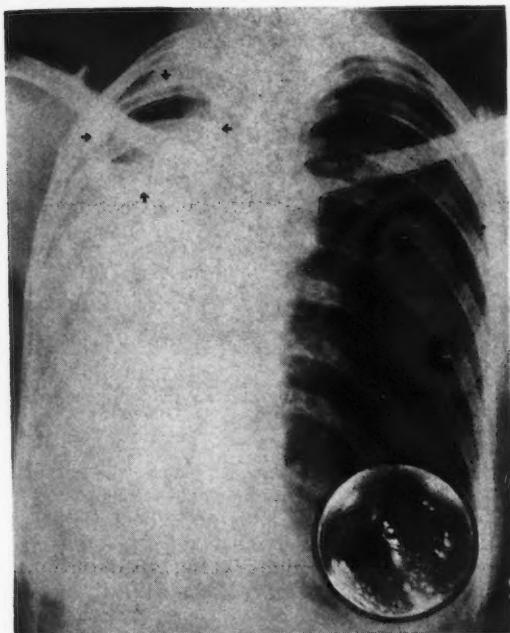


Fig. 1.—Progressive atelectasis of the right lung with tennis-ball cavity. Insert shows original extent of acute hyperplastic mucosal tuberculosis, limited to the stem bronchus. The tracheal mucosa was later involved. Roentgen therapy resulting in severe lower tracheal and bronchial stenosis. Death. Such a lesion now would be treated with electrocautery when first seen.

ease is seen at the lobar bronchial orifices. The stem bronchus may then become involved circumferentially. Finally, the tracheal mucosa is affected by direct extension. Several types of lesions may be recognized.

1. The mucosa may show ulceration which occasionally extends to the cartilaginous rings. Obstructing granulation tissue may be present. Ulcerative disease always is potentially serious, and frequently progresses after the pulmonary tuberculosis is controlled.⁵ Acid-fast bacilli are constantly present in cases of bronchial ulceration. At present active collapse therapy is not recommended unless the ulcers are regressing or unless local treatment of the mucosal disease is possible. Spontaneous regression has been noted but it cannot be predicted.

2. Submucosal tuberculosis may show as a flattened, nonobstructive lesion with discrete tubercles. The mucosa is edematous, granular, and bleeds easily. Occasionally there may be difficulty in distinguishing between submucosal tuberculosis and nonspecific infection. It would appear that submucosal disease is relatively less active than is the ulcerative type, the former usually healing with adequate control of the pulmonary infection. Occasionally, submucosal tuberculosis becomes hyperplastic and the formation of tuberculomas may cause partial obstruction of the lumen. These lesions may progress and they deserve active treatment.

3. Fibrostenosis may result from the healing of hyperplastic or ulcerative lesions. The clinical importance of a fibrostenosis depends upon its

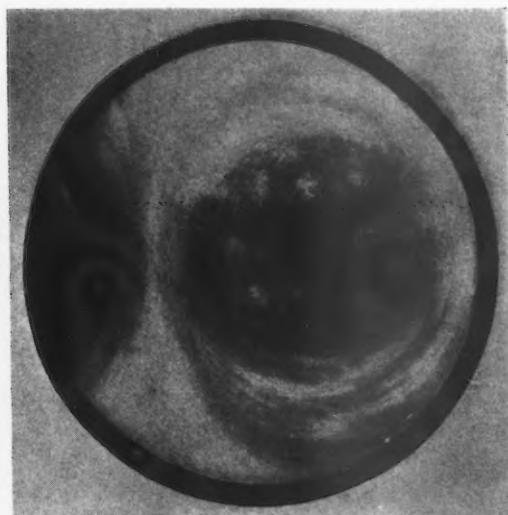


Fig. 2.—Pure fibrostenosis of the right stem bronchus at the carina. The patient wheezed, had difficulty in raising sputum, and was slightly dyspneic. Dilatation on three occasions prior to thoracoplasty gave great symptomatic relief. Operation without incident.

location and the degree of obstruction which it causes. Death has resulted directly from obstruction. Other patients have remained chronically ill because of occurrence of bronchiectasis with retained purulent secretions, distal to a stenosis.

We have seen extension of the pulmonary tuberculosis following biopsy of tuberculous mucosal lesions, and feel, therefore, that this procedure should not be done unless some means is available for immediately cauterizing the biopsied area.

SYMPTOMS AND ROENTGENOGRAPHIC FINDINGS

Symptoms of most importance include: persistent oral wheeze and rhonchi; asthmatoïd attacks with tenacious sputum; paroxysmal cough and difficult expectoration; positive sputum, in spite of quiescent pulmonary tuberculosis.

Roentgenographically, *atelectasis* is significant. This may be lobar or involve a whole lung; intermittent or progressive and permanent. Failure of a cavity to collapse with adequate pneumothorax, failure of pulmonary re-expansion and "tennis-ball" or "balloon" cavities also are caused by obstructive mucosal tuberculosis. The combination in one lung of a tennis-ball cavity and atelectasis apparently is pathognomonic of bronchial disease (Fig. 1).

Tennis-ball cavities are worthy of special note because their significance usually is not appreciated. Roentgenographically they are large and round and tend to balloon peripherally, assuming the contour of some portion of the chest. When in the upper lobe, the inferolateral margin of the cavity appears to cut sharply mesialward. A lobe or an entire lung may be replaced by a single cavity. Tennis-ball cavities apparently are produced by mucosal disease, causing an expiratory check-valve obstruction in a second or third order bronchus. The check-valve mechanism has been described by

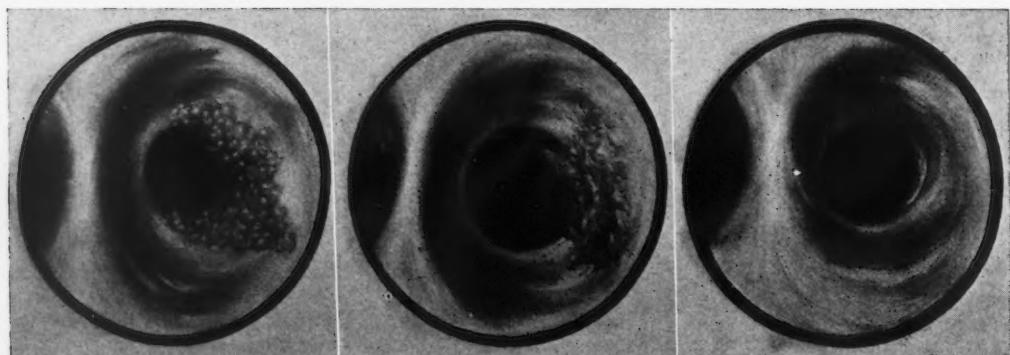


Fig. 3 (a).—Granuloulcerative mucosal tuberculosis of right stem bronchus at the carina, before treatment with electrocautery. Sputum highly positive on smear. Atelectasis of right upper lobe but no active pulmonary tuberculosis. (b) Regression after three treatments at fourteen-day intervals. (c) Complete healing after total of five treatments. The sputum has been persistently negative on culture for eighteen months.

Jackson in connection with foreign bodies in the bronchus, and more recently by Coryllos⁶ in tuberculosis. Intracavity manometric pressures are usually greater than atmospheric. Following the withdrawal of air the pressures may return to positive after coughing, thus proving their connection with the bronchial tree. Salkin's⁷ theory that these cavities are entirely blocked does not appear to be substantiated. He could not explain the persistence of auscultatory cavity signs in his cases, but it must have been on the basis of a bronchial connection. In cases of tennis-ball cavity bronchoscopy may be negative, but the instillation of iodized oil usually shows the obstruction in a secondary or tertiary bronchus.

TREATMENT

Experience has shown repeatedly that symptomatic medical treatment for mucosal tuberculosis is worthless. No cure has been reported from tuberculin therapy. If a suffocative death is threatened, palliation may be accomplished by bronchoscopic aspiration.

In pure fibrostenosis of a stem bronchus bronchoscopy with mechanical dilatation is the treatment of choice. This may be performed prior to thoracoplasty (Fig. 2) or between stages, if obstructive symptoms develop. Rarely the obstruction is so great that dilatation cannot be done. In these cases lobectomy or pneumonectomy must be considered instead of thoracoplasty. Pneumonectomies have been performed successfully by Jones,⁸ Alexander, and Holman for extensive bronchial obstruction. Tennis-ball cavities may be extremely resistant to treatment. If collapse therapy fails, lobectomy or external drainage of the cavity must be considered. Fibrostenosis of the trachea is always grave. Collapse therapy invariably aggravates the patient's distress. Bouginage with solid dilators has not been successful, but the use of graduated-sized bronchoscopes can give temporary relief.

Since hyperplastic and ulcerative mucosal tuberculosis often is progressive, we feel that active local treatment is indicated, usually in conjunction with pulmonary collapse. Two methods only have been used with success.

If the entire lesion is accessible to the bronchoscope, we favor the use of local electrocautery with

the high-frequency current. Both acute and chronic lesions can be treated. Special small-diameter bronchoscopic electrodes have been designed. Partially obstructing masses of granulation tissue can be removed and the base cauterized in a series of three or more treatments (Fig. 3). This method has the advantage of affecting only the active lesions, and often there is no great increase in stenosis. Perforation of the bronchial wall, with hemorrhage, is a possible complication. At the present time a number of cases are being treated with favorable results. Ultra-violet therapy may be used as an adjunct to electrocautery. When used alone, however, it has not proved effective for obstructing granulo-ulcerative lesions.

The second method of treatment is by the roentgen ray. Destruction of granulation tissue, healing of ulceration and hastening of fibrosis, can be accomplished. There are certain definite hazards and other tissues may be damaged. In six patients out of twelve, radiation was of unquestioned value. In the remaining six, results were poor. Roentgen therapy should not be used in patients with acute mucosal tuberculosis. In general radiation now is reserved for the chronic lesions which, because of technical difficulties, cannot be treated by electrocauterization.

In conclusion, mucosal tuberculosis of the lower airway is a relatively common complication of pulmonary tuberculosis and shows characteristic symptoms and roentgenologic changes. The importance of bronchoscopy in diagnosis and treatment should be remembered. Local treatment is indicated in the more advanced forms, including bronchoscopic dilatation, electrocauterization, ultra-violet and roentgen radiation. Occasionally the secondary effects of bronchial obstruction may necessitate lobectomy, pneumonectomy, or the external drainage of a tuberculous cavity.

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DISCUSSION

JOHN C. JONES, M. D. (427 South Arden Boulevard, Los Angeles).—As the result of the increased and discrete employment of the bronchoscope in cases of tuberculosis of lungs with tracheobronchial symptoms, many heretofore unexplained clinical and roentgen "mysteries" have been solved. This has been accomplished without great sacrifice and discomfort to the patient, without major complications, and has led to a considerable number of patients being spared major surgery when the latter would have been fatal or at least carried a high morbidity. At the same time local treatment of these lesions through the bronchoscope will result in the arrest of tuberculous disease in a certain number of cases where persistent positive sputum alone holds the patient bedfast a long time in spite of a roentgenogram which failed to show parenchymal activity.

Of all these cases of tuberculous tracheobronchitis, probably those of a stenosing character, with tuberculous bronchiectasis and severe secondary infection distal to the stenosis, carry the gravest prognosis by virtue of their poor bronchial drainage and its inevitable severe toxicity. Collapse therapy fails to alleviate the burden of this toxicity, and may only increase it if the drainage is further hampered by "bronchial kinking." The ideal treatment is eradication of the disease by lobectomy or pneumonectomy, depending on the location and extent of the disease.

About one year ago we had a 28-year-old female with tuberculous bronchiectasis of the entire left lung as the result of a tuberculous ulcerating stenosis of the left main stem bronchus. Her temperature had been elevated to 102 and 103 degrees Fahrenheit persistently for two and one-half years, during which time bed rest, pneumothorax, and phrenicectomy had failed to relieve her symptoms. She had lost forty pounds in weight and had continued a down-hill course throughout her sanatorium treatment. A total left pneumonectomy with drainage was completed eleven months ago and the patient had an uneventful surgical post-operative course. In three months she regained all her lost weight and was without fever and sputum, but a fistulous tract persisted in the chest wall when she was discharged from the hospital four months postoperatively. Unfortunately, following two months of too active life on the outside, she returned with an exudative contralateral spread which has shown a progressive clearing without excavation on return to bed rest in the hospital.

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SIDNEY J. SHIPMAN, M. D. (490 Post Street, San Francisco).—Doctors Pierson and Samson's discussion of tuberculous tracheobronchitis is very timely indeed. The entire subject is a new one, for although the effects of this disease have been observed for many years, the significance of the condition has remained almost completely unrecognized.

Tuberculous patients who have been doing well but who suddenly begin to wheeze, particularly if this wheezing is localized to the affected lobe or lung, should be suspected of having tuberculous bronchitis. Whether general or local treatment is advisable depends upon the individual case. Tuttle of Detroit recommends 35 per cent silver nitrate applied locally through the bronchoscope. I, personally, prefer general irradiation with the quartz lamp to the point

of tanning, particularly in the early, allergic reactions which it is so important to recognize. Probably this form of treatment is less and less effective as time goes on, until, of course, it has no effect at all on the scarred stenoses.

The relationship of the condition to "tennis-ball cavities" is interesting, as the authors have pointed out. It is well recognized now that not all cavities are the result of the expectoration of caseous material, but that they develop as the result of the valve effect due to diseased bronchi. The lumen of the bronchus is diminished, the bronchus expands during inspiration, allowing air to enter the lung, but contracts on expiration and does not permit it to get out. Apparently this mechanism keeps cavities blown up or prevents their collapse. Theoretically, a return of the bronchus to normal should eliminate this mechanism, although certain writers, notably Coryllos, have contended that it would be better to have the condition go on to complete closure of the bronchus, when absorption of the air and closure of the cavity should take place. Whether either or both of these ideas are correct, time will tell.

Meanwhile the subject is a fascinating one for investigation, and it is to be hoped that Pierson and Samson will continue the work which they have so well described.

ROENTGEN TREATMENT OF CERTAIN HEMORRHAGIC DISORDERS*

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DISCUSSION by R. S. STONE, M.D., San Francisco; JOHN C. RUDDOCK, M.D., Los Angeles; S. P. LUCIA, M.D., San Francisco.

FOUR years after Frank's⁵ description of thrombocytopenic purpura as a separate entity, in 1920, Stephan¹⁷ reported two cases as cured, following roentgen irradiation to the spleen. Since that time there have been many reports of single cases or small series of cases treated by irradiation, some with favorable results and some unfavorable. Doubtless, among the reasons for the variability in results is the variability in severity of individual cases of thrombocytopenic purpura hemorrhagica; another reason is the variable and, in some cases, the incomplete nature of the roentgen therapy given. With more careful classification and selection of cases, and with irradiation, especially of cases of splenic thrombocytopenic purpura hemorrhagica, results appear to be much more encouraging.

IN THROMBOCYTOPENIC PURPURA

Mettier and Stone¹⁰ treated six patients with essential thrombocytopenic purpura by fairly large doses of roentgen rays to the spleen, and secured remissions lasting up to four years. Four of the cases were acute, and two of the cases chronic. Most of the patients received 200 r daily or every second day to the spleen, using fields approximately 10 by 15 centimeters (200 KV, filter equivalent to 1.00 millimeter of copper). A total of from six to twelve treatments was given to most of the cases. All of the patients showed remarkable increases in platelet counts immediately or soon after irradiation, the rise being approximately 500 per cent. Following the platelet response, the clotting mechanism gradually became normal and the bleeding gradually lessened. In the chronic cases the plate-

* Roentgen treatment of the spleen, to shorten bleeding time in thrombocytopenic purpura and in postoperative capillary hemorrhage.

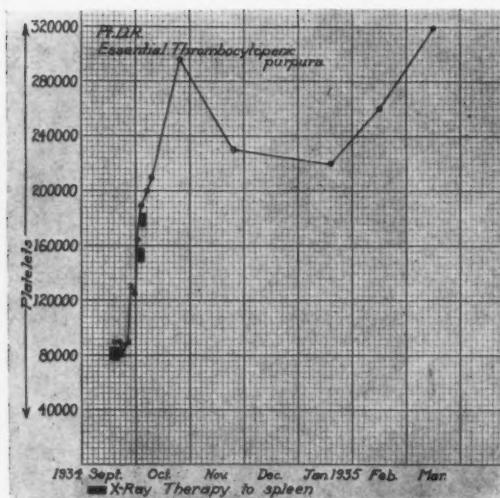


Fig. 1.—Chart illustrating increase in blood platelets, following roentgen irradiation of spleen—in case of essential thrombocytopenia. (Figures 1 to 4 are by kind courtesy of Doctors Mettier and Stone.)

lets dropped again soon after treatment was discontinued, but apparently without associated bleeding. One case of acute fulminating purpura resisted all treatment. In summary, five of six cases did well, but one patient with acute fulminating purpura died.

Rudisill¹⁴ treated eight cases of thrombocytopenia (four purpuric and four nonpurpuric) with a somewhat similar technique, 200 r to the spleen, repeated from one to six times (200 KV, filter equivalent to 0.5 millimeter of copper, field 20 centimeters in diameter). He "found roentgen treatment so satisfactory that it is impossible to understand why it has not come to be considered practically a specific therapeutic agent in primary thrombopenia with hemorrhage." Seven of the cases showed complete remissions, lasting from one to four years, the average being over two years. One patient, a boy of eight, complicated by acute myelogenous leukemia, died of the leukemia.

Marzullo⁹ reported four cases of thrombocytopenic purpura treated by x-rays, two of which patients improved but recurred, two died, one over a year after treatment. In this case, bleeding time fell from twelve to two and one-half minutes following treatment.

Results of Splenectomy.—In contrast with the above results from roentgen therapy, it is well to compare the results of splenectomy. Brown and Elliott³ reported twenty-one cases of thrombocytopenic purpura hemorrhagica; ten were treated by splenectomy (one mild case, six moderate, and three severe cases) in eight of whom excellent remissions were secured; one of the patients improved and one died. The average duration of the remissions was over five years, varying from one to eleven years. The other eleven cases were not operated on; five improved, five remained unimproved, and one died. None was treated by splenic irradiation.

Marzullo⁹ reported nine cases treated by splenectomy, five of whom recovered, two recurred, and two died.

Mettier,¹¹ commenting on splenectomy, observes that "removal of the spleen is not entirely satisfactory; the mortality rate is high and a high percentage of patients have recurrence of symptoms."

RATIONALE OF TREATMENT

The exact reason for improvement in purpura hemorrhagica following splenic irradiation is not known. It is quite definite that irradiation is followed by an increase in blood platelets, diminution in bleeding time,[†] and coincident diminution or disappearance in hemorrhagic tendency. Rudisill believes that there may be two distinct classes of essential thrombocytopenic purpura; one secondary to toxemia and one secondary to unknown causes. In the former class, "the spleen's function" of platelet destruction "need only be lowered, until the toxemia is overcome" (usually accomplished by one to three roentgen treatments), but in the latter case "it may be necessary to render the spleen permanently functionless by intensive irradiation." (The question of this so-called roentgen-ray "splenectomy" is also discussed by Mettier and Stone.¹⁰) Lucia⁷ observes that "exposures to x-ray alter the plasma in such a way as to inhibit bleeding."

ROENTGEN THERAPY FOR CAPILLARY Oozing AND INCREASED COAGULATION TIME

There is very little literature on the control of increased coagulation time and capillary oozing by roentgen irradiation of the spleen, except incidental to that already referred to above in connection with the treatment of purpura hemorrhagica. Markovits⁸ refers to work by Tichy and Nigst, but does not give any specific references. With Dr. Roy Parkinson we recently studied the effect of roentgen irradiation of the spleen in "normal" persons—mostly patients admitted to the hospital[‡] for minor surgery; sixty-one patients were given a single dose of 160 r to the spleen and forty-eight patients were untreated.¹³ The investigation was conducted as follows: a platelet count and coagulation time was determined at 7:30 a.m. The

[†] Note on coagulation and bleeding time:

Coagulation time: The coagulation time is the time which the blood takes to clot after it has been shed. As determined by different methods, it varies considerably, since the criterion of clotting is not the same in all. On this account the values are not absolute, and the results obtained by different methods cannot be compared strictly with one another. A simple method is to draw a drop of blood into a capillary glass tube about 10 cm. long, and break off a section from time to time until fine threads of fibrin appear between the ends of the broken sections; the time elapsing from making the wound to the time of fibrin development is the coagulation time (about four minutes being normal).

Bleeding time: The bleeding time is the time a drop of blood (produced by pricking the skin) takes to clot sufficiently to close the puncture and stop the bleeding. It is determined by pricking the skin and touching the wound every few seconds with a piece of filter paper, the moment when the latter ceases to be stained being the end-point (normally about three minutes). The coagulation time is a better gauge of the body's ability to protect itself against hemorrhage than the bleeding time.

In hemophilia the coagulation time is greatly prolonged, but not the bleeding time; the platelets are not decreased in number, but show lessened fragility; the clot usually retracts normally. In purpura hemorrhagica thrombocytopenica the coagulation time is usually within normal limits, but the bleeding time is prolonged; the platelets are decreased in number; the clot does not retract normally and is soft and friable.

[‡] St. Joseph's Hospital, San Francisco.

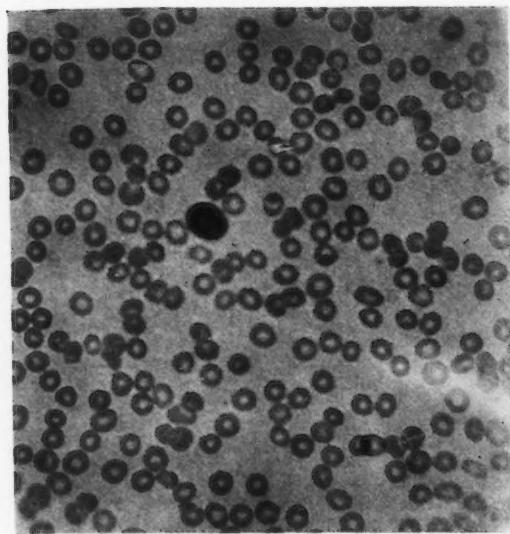


Fig. 2

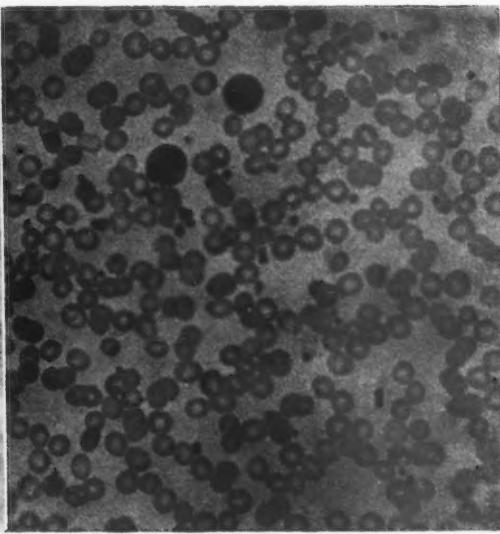


Fig. 3

Fig. 2.—Blood smear showing absence of platelets in patient with essential thrombocytopenic purpura.
Fig. 3.—Blood smear showing presence of large number of platelets in same patient as Fig. 2, following splenic irradiation.

treated cases were then given a dose of 160 r to the spleen. In a number of cases, a platelet count and coagulation time was done immediately after finishing treatment, and in all cases was done at 4 p. m. The surgical procedure was done at approximately 8 a. m. Similarly, in the control cases, platelet counts and coagulation times were determined at 7:30 a. m. and 4 p. m., and similar surgical procedures were performed at 8 a. m.

In fifty-nine of the sixty-one cases treated by x-rays there was a drop in coagulation time averaging 2.5 minutes, and an increase in platelet count of from five- to sevenfold. The most significant drops in coagulation time were in those cases in which the coagulation time taken before irradiation (that is, patient's "normal" coagulation time) was six minutes or more. For example, in a group of fifteen patients with coagulation time exceeding six minutes, the average time before irradiation was 7 minutes 41 seconds, and after irradiation 3 minutes 42 seconds. The change took place immediately. The surgeon often observed that the operative field was strikingly dry—so remarkably so that, for example, in tonsillectomy cases he was able to tell whether the patient had or had not received irradiation by the amount of capillary oozing.

In the forty-eight control cases there was an average drop in the coagulation time of a little less than half a minute, attributed presumably to the surgical procedure or the anesthesia.

Coagulation times were done by the capillary method, using one millimeter diameter tubes and taking blood from the ear. The platelet counts were done by the chamber method, using Wyckoff's modified platelet stain. Doctor Downey kindly supervised this part of the work, using different laboratory workers and interns from time to time in order to avoid bias. The x-ray factors used were 130 KVP, filter of 0.25 millimeter copper, 25 centi-

meters target-skin distance, 13 centimeters diameter skin area, single dose of 160 r (measured in air, without backscatter).

RATIONALE OF TREATMENT

Markovits⁸ believes that roentgen irradiation causes "disintegration of leukocytes and lymphocytes in the spleen, with consequent liberation of a ferment which promotes coagulation." However, other authors (Nigst, Szenes, Gal, Amreich⁹) allege that acceleration of blood coagulation also occurs following irradiation of other organs, such as the liver, lung, and parotid. Arkussky¹ reports decrease in iron excretion following irradiation of rabbits' spleens, with associated storage of iron in the liver. Bourne² reports that there is a significant drop in the polymorphonuclear leukocytes in the spleen following irradiation. However, we do not know whether it is a splenic or "total blood stream" effect. Sokolov¹⁰ has shown that irradiation affects certain mineral constituents of the blood plasma, producing physiochemical changes that affect the general organism.

INDICATIONS FOR SPLENIC IRRADIATION IN HEMORRHAGIC DISORDERS OTHER THAN PURPURA

From the above observations it is obvious that splenic irradiation is of considerable value as a pre-operative measure in patients with low platelet counts or increased coagulation times. It is also of value in some benign uterine hemorrhages. Volpe¹¹ reports a series of cases of metrorrhagia in young women, apparently cured by doses of 200 r to the spleen repeated after five days, and again at monthly intervals for from two to six treatments. Markovits⁸ suggests its use also in melena neonatorum, hemophilia, and chlorosis. We have not used it in any of these kinds of cases, but

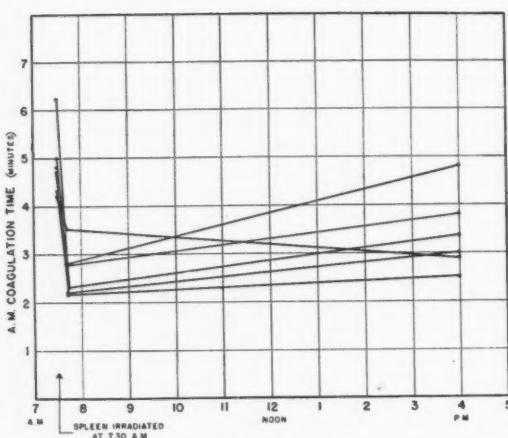


Fig. 4

Fig. 4.—Chart showing shortening of coagulation time immediately, and for twelve hours following splenic irradiation (six cases).

Fig. 5.—Chart showing shortening of coagulation time eight hours after splenic irradiation (sixty-one cases) with controls (forty-eight cases).

see no reason why it should not be tried following or in conjunction with the use of the more time-honored and simpler remedies. It may also be valuable in epistaxis, gastric oozing, and in other types of bleeding.

SUMMARY

Moderate or large doses of x-rays administered to the spleen control or produce long remissions in many cases of essential thrombocytopenic purpura hemorrhagica. A sufficient number of years has not yet elapsed to warrant the conclusion that the treatment is superior to splenectomy, but recent reports suggest that it is at least equally effective as such, with, of course, a zero mortality from the treatment itself. In cases in which it is proposed to attempt ablation of splenic function by irradiation it would be advisable to check the accuracy of the roentgen beam centering by means of a film, since the spleen is variable in position and it is obviously important to be certain that the entire organ is being irradiated.

Small doses of x-ray administered over the spleen of a patient with increased coagulation time produce rapid decrease in coagulation time, with associated rise in platelets and consequent control of capillary hemorrhage. The treatment causes no inconvenience to the patient and may, indeed, be done en route to the operating room, or, with a bedside unit, in the case of those gravely ill. Irradiation is simple, rapid and effective in a high percentage of cases.

450 Sutter Street.

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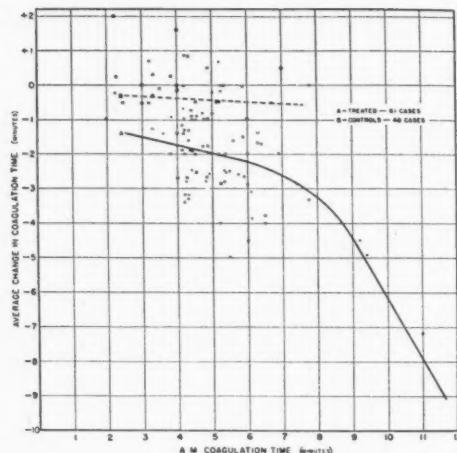


Fig. 5

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DISCUSSION

R. S. STONE, M.D. (University of California Hospital, San Francisco).—Doctor Garland was kind enough to refer, in his discussion, to the paper by Doctor Mettier and myself on the irradiation treatment of patients with essential thrombocytopenic purpura hemorrhagica. In connection with the work which Doctor Mettier and I reported, I can only add that we are still as satisfied with the method of treatment as we were when the report was made, and that patients there reported are continuing to do well. The administration of further x-ray therapy to these patients has been extremely rare.

In a recent issue of the *Journal of the American Medical Association* there was an article by Doctor Wintrobe on

purpura hemorrhagica, and in it x-ray therapy was given extremely small mention. I think that this is evidence of the fact that the irradiation treatment of the spleen for purpuric conditions is not sufficiently well understood or appreciated. This is most likely due to the fact that the amount of irradiation given in the majority of instances is not sufficient to accomplish the results desired. If only one or two treatments are given to the spleen, there may be a temporary increase in the platelet count, and a cessation of hemorrhage; but if the treatment is not carried to a much higher level the platelets are likely to drop again and the condition recur. We have found it necessary to carry the treatments to as much as 1,200 roentgens to the spleen from at least two ports in order to make the cure more or less permanent.

I have not had the opportunity to check or repeat the work which Doctor Garland has done in connection with roentgen therapy for capillary oozing and increased coagulation time. I am extremely interested in this work, and it opens up a new field. If the preoperative irradiation of patients whose coagulation time is prolonged were established as a routine, it seems likely that the marked bleeding of these cases would be a thing of the past. From Doctor Garland's report it would seem that this would be a logical step, particularly in the case of tonsillectomy operations. I hope that this work of x-ray treatment of the spleen will receive a more widespread attention, and be given a more thorough trial in the future, so that either corroboration or disproval of the results which he has reported, and those which Doctor Mettier and I reported at an earlier time, may become established.

* *

JOHN C. RUDDOCK, M.D. (1930 Wilshire Boulevard, Los Angeles).—The subject of the treatment of thrombocytopenic purpura hemorrhagica is one that has been before the medical profession since 1925, at the time Pancoast, Pendergrass, and Fitzhugh published "The Status of Roentgen-Ray Treatment by Irradiation of the Spleen." Controversy between surgeons and roentgenologists has been evident as to which is the best method of treatment.

The roentgenologists certainly can say that there is a zero mortality from the treatment itself. The surgeons state that, by the complete removal of the spleen, they reduce the possibility of remissions. It is a question whether complete ablation of the spleen can be done by roentgen-ray without other effects upon the body than the purpose for which the splenectomy was done.

Cases are often encountered of thrombocytopenic purpura, with active bleeding, in which the patient is practically "bled out," and in spite of transfusions it is impossible for them to retain enough blood to build them up. X-ray therapy is slow, but I must say that it is safe at this stage. Often we must give repeated transfusions during the irradiation of the spleen, as the bleeding does not stop immediately, but may continue for a number of days before clotting and bleeding time approach normal. It is my opinion that when this has been accomplished, and by means of transfusions the blood volume has been returned to normal, that a splenectomy should be done. It is my opinion, also, that remissions, if these patients were treated by a combination of roentgen-ray and surgery, would be fewer and the surgical risks would be lessened if the patients received irradiation in order that they may be made a good risk.

The irradiation of the spleen in normal persons prior to minor surgery in order to guard against capillary oozing and postsurgical hemorrhage is excellent, and I believe it is a timely subject.

Doctor Garland should be complimented on his excellent review on the subject of this type of disease treatment, and on his calling attention to the fact that, due to the variability and severity of individual cases and variability of the nature of the roentgen therapy given, much variability will be noted in the results reported from the treatment of this disorder both by roentgenologists and surgeons.

* *

S. P. LUCIA, M.D. (2529 Union Street, San Francisco).—Variation in the results of roentgen irradiation of the spleen in thrombocytopenic purpura hemorrhagica is a matter not only of variability in the severity of individual cases, and in some instances of inadequacy of amount of roentgen

therapy, but also of variability in the type of the disease. Thrombocytopenic purpura is usually a symptom-complex of a more complicated disease involving alterations in structure of the hematopoietic tissues and blood plasma, and in permeability of capillaries. It may be a manifestation of infections, leukemia, heavy metal therapy, or arteriosclerosis. A variety of this condition, occasionally congenital, is seen in women who suffer from endocrine glandular hypofunction. All types of purpura may or may not be associated with splenomegaly.

The purpura state is not necessarily associated with thrombocytopenia—in fact the blood platelets may be found to be increased in numbers. Frequently it is difficult to state which factor—platelets, plasma, or capillaries—is most important in a given case. One thing is certain: that in order that purpura may occur, the capillaries must be abnormally permeable. It is indeed unfortunate that the varieties of thrombocytopenic purpura cannot always be differentiated or the mechanism of their production be understood. This, I believe, is the reason for discord in the reports of the results of treatment found in the literature.

Before the treatment of thrombocytopenic purpura hemorrhagica can be placed on a rational basis, more careful study must be made of plasma, capillaries, and platelets in individual cases. It is important also to learn the mechanism by which blood platelets are increased and the manner in which the coagulation of blood is altered after exposure to roentgen irradiation.

In conclusion, it may be stated that: (1) Acute purpura without splenomegaly is best treated by transfusion. This variety frequently proves refractive to all therapeutic measures, including roentgen irradiation and splenectomy. (2) Chronic purpura without splenomegaly (refractive to medical treatment) may react favorably to roentgen irradiation for limited periods of time. (3) Acute purpura with splenomegaly (usually secondary to some more complex disease) frequently gives a favorable response temporarily to a variety of therapeutic measures, including roentgen irradiation. (4) Chronic purpura with splenomegaly usually responds satisfactorily to roentgen irradiation.

VITAMIN D IN ACNE*

A COMPARISON WITH X-RAY TREATMENT

By MERLIN T.-R. MAYNARD, M.D.
San Jose

DISCUSSION by George V. Kulchar, M.D., San Francisco; Henry J. Templeton, M.D., Oakland; Nelson Paul Anderson, M.D., Los Angeles.

THERE is probably no skin disease of greater importance to the human race than acne. It is undoubtedly our commonest skin disease, and it is rare that any individual reaches maturity without having had it in one of its phases. It is a disease of considerable economic importance, as the disfiguring scars of a severe case are never completely obliterated. It is also a disease of youth. It attains its most noxious form at the time the individual first has to earn his own living. It is undoubtedly responsible for many failures in getting business positions. It is also the basis for inferiority complexes and discouragement in young people.

The dermatologist sees only a small percentage of patients, since many patients are not treated in the expectancy of the condition being outgrown. A goodly percentage are treated over the drug counter or by the family doctor, usually with little success. In dermatological practice, acne cases are likely to rank about third in the frequency of skin diseases, and for this reason are of considerable

* Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-sixth annual session, Del Monte, May 2-6, 1937.

importance to the specialist. The dermatologist has many weapons with which to attack the disease, as listed below.

OUTLINE OF ACNE THERAPY

1. Dietary.
2. Endocrine.
3. Vaccines and bacteriophage.
4. Local.
5. Physiotherapeutic.
 - a. Ultra-violet light.
 - b. X-ray.
6. Chemotherapy.
 - a. Colloidal manganese.
 - b. Saline and glucose.
 - c. Sulphids by mouth.

COMMENT CONCERNING THERAPEUTIC MEASURES

I hardly need call to your attention, as dermatologists, the dissatisfaction of the above treatments; but I will run over them briefly.

Dietary treatment alone has rarely resulted in a cure. The type of diet depends upon which school of thought we follow. If we believe in a low carbohydrate diet, our results seem about the same as when we allow a dominant amount of this factor. Undoubtedly, food sensitization does play some part, and chocolate, for example, should certainly be eliminated.

The *endocrine factor* in treatment has always appealed to the professional mind. This is natural, in view of the fact that acne is a disease of puberty and its future years only. I think we can say that no endocrine extract has been sufficiently successful to warrant a major place in our therapeutic attack. When anterior pituitary "S" fraction first came on the market, I used it experimentally on twelve cases. I gave a total of 150 injections to these patients. I undoubtedly got good results in the early adolescent type, and was able to prevent the menstrual flare-up in women. I found, however, that my cases relapsed on discontinuing the injections, and the patients were dissatisfied. There is a distinct question in my mind whether or not anterior pituitary is justifiable, except as an adjunct to other therapy.

Vaccines and bacteriophage have their champions, and I believe that we may yet find these procedures to be more useful than they have been in the past. At the present time, the high cost to the patient, the time lost in treatment, and their uncertain results place them still in the experimental stage. Local treatment has been used for centuries and has changed little except in the elegance of the preparation applied.

Local treatment is of undoubted benefit, and simple cases will commonly require nothing else. The nature of the acne process, and the barrier of the hyperkeratotic reactions of the duct, with the comedone formation, make it impossible to get sufficient penetration for any deep effect. The preparations of sulphur have always dominated this field. Chemotherapy has made some definite strides in the past few years. Colloidal manganese has given excellent results in the hands of E. L. Oliver and G. M. Crawford.¹ Intravenous sodium chlorid injections have been reported favorably by Goodman,² G. M. Crawford and J. H. Swartz³; like-

wise have found promise in the similar use of dextrose solution. These procedures are well worth a trial. I have personally used them too little to comment on them further.

Physiotherapeutic procedures have been most prominent in the last two decades. These have mainly consisted of ultra-violet light and x-ray. About ten years ago ultra-violet light began to wane in popularity. In the past few years a review of the literature shows that the firm position of x-ray has been somewhat undermined. A decade ago x-ray was used almost without question on all patients. We found it of much value. We were able to produce cures and excellent cosmetic results. We were successful in severe cases that were doomed to lifelong disfigurement, unless the process was quickly stopped. X-ray still dominates the field in severe cases. It has been my experience, and I am sure the experience of all of you, that too high a percentage of cases will relapse after x-ray therapy, if that alone is used in treatment. I do not deny that we can get more cures with x-ray than with any other procedure. But the reasons for failure, and the reasons for relapse, have been behind the development of the study here presented. I might say that a further disadvantage to x-ray is that its competent use is only sparsely available to the patient. There is a great hinterland of the country where skilled roentgen therapy is unheard of, and the acne sufferers must depend upon the advice of the general practitioner for care. I, therefore, believe it is the responsibility of the dermatologists to place in the hands of these practitioners the type of treatment that will halt or modify the ravishes of disfiguring acne. I should not neglect to say, however, that x-ray therapy, properly used, will not produce damage to the patient. Ultra-violet light therapy has been discouraging, because it does not prevent recurrences of the disease, and requires numerous and expensive visits to the doctor's office.

In the foregoing part of this paper an attempt has been made to point out forms of treatment that have a definite value. I would say that, as a general rule, the disadvantages are those of requiring frequent treatment, expense of administration, and lack of general constructive effect.

VIOSTEROL IN ACNE

The patient commonly asks the doctor if he "shouldn't have something for his blood." We also feel that the patient should be put in the best possible health. The missing elements, or the excess thereof, that cause acne to develop in the adolescent, should receive every intelligent consideration. It was in response to this need that, in 1933, I started, in acne cases, giving viosterol by mouth. This was stimulated later by the results of A. Doktorsky and S. S. Platt.⁴ I read an abstract of this paper in January, 1934, in the Year Book of Dermatology. I then began to use vitamin D in all cases, and have continued it up to the present time. The use of vitamin D seemed to fit in where needed. It improved the patients' general nutrition; many of them put on weight, and the majority of them felt much better. Its use

seemed rational. Vitamin D is synthesized in the skin on exposure to sunlight. Might not this be the factor that caused healing on ultra-violet therapy? Vitamin D is a mobilizer of calcium. It is probably withdrawn from its reservoir in the skin at puberty for the purpose of the utilization of calcium in growth of bone and muscle. Vitamin D has the further advantage of reasonable cost.

The subject of vitamin effects in the body is so large that I will not attempt to make a prolonged dissertation on the subject. The Council of Pharmacy and Chemistry state that the following are allowable claims in relation to vitamin D:

Animal experimentation has shown that correction of an inadequate dosage of vitamin D results in the more economical utilization of calcium and phosphorus, and also that the undesirable effects of improper ratios of calcium and phosphorus in the diet can largely be overcome by normal intake of vitamin D. . . . It may be stated that vitamin D has a favorable influence on calcium and phosphorus metabolism.

DANGERS OF VITAMIN D ADMINISTRATION

Dr. C. D. Leake⁵ has pointed out that certain dangers exist in the unregulated intake of vitamin D preparations. He states that these symptoms are largely due to the substance "viosterol," and that this preparation should be carefully guarded against in the manufacturing of the product. The symptoms brought on by vitamin D toxicity appear about two weeks after the high daily dosage begins. The patient is nauseated, dizzy, and has tingling in the extremities. There may also be vomiting, diarrhea, and polyuria. Mild symptoms of toxicity occurred twice in my series of cases.

In regard to dosage of vitamin D, we probably have considerable latitude. The statement is made that 200 drops a day may be given with safety to juveniles. The Council on Pharmacy and Chemistry of the American Medical Association suggests a maximum daily dose of 1,000 units in lay advertising. Larger doses, of course, may be given under the supervision of a physician. C. I. Read of Chicago, in a study made of the administration of highly concentrated vitamins of 10,000 X gave to three hundred patients, ranging from seven to seventy-two years of age, doses of from 3,000 to 2,760,000 international units daily, or a maximum of 920 times the normal antirachitic dose of 3,000 international units. This group of forty-three patients showed symptoms of toxicity of varying degrees.

GENERAL PHYSICAL EFFECTS

The general physical effects of viosterol administration are those of increase of appetite, improved food absorption, gain in weight, and a general sense of well-being.

The reaction of the patients on the mental side has been helpful. Their improvement in appetite, and often a lessening of fatigue, have been factors of value in getting cooperation in treatment. In no instance, except in the above-mentioned cases of intolerance, have I had a patient dissatisfied with this form of treatment. From the standpoint of the physician it effectively answers the old ques-

tion, "What can we do to improve the patient's general health?"

DISCUSSION

Before going forward with the discussion of my survey I wish to state that I cannot claim that viosterol is more effective, if given alone, than it might be when incorporated with the other recognized vitamins. It is quite possible that the addition of vitamin A would be of value, and it is my intention to make a further survey of cases in which this has been done. Up to the present time, however, I do not believe that the addition of vitamin A helps the patient's response, and it does definitely increase the expense. It is also likely that vitamin D is not the most effective of this group, and only a future series will make possible a comparison.

I consider the following cases to be fair illustrations in this series.

REPORT OF CASES

CASE 1.—December 5, 1936. R. W., age thirteen. Adolescent acne comedone. Sister, age thirty, has acne. Number of deep lesions present. Given lotio alba cream and viosterol, twenty drops each morning.

January 9, 1937. Appetite fine. Skin dry and much better; deeper lesions absorbing.

February 13, 1937. Pimples stopped; blackheads dry. To apply hot compresses to remove. This patient is illustrative of a normal response.

† † †

CASE 2.—June 17, 1935. Miss B. H., age nineteen. Acne two years. Feels tired; menses normal; bowels somewhat constipated. Acne of deep cystic type in chin area. Viosterol, twenty drops daily, prescribed.

July 9, 1935. Weight 119, gained three pounds; appetite better; still tired; acne distinctly better.

August 6, 1935. Better.

September 3, 1935. Weight 117 pounds. Almost healed.

January 31, 1936. No longer tired; feels fine. A few new lesions around Christmas time. Entirely satisfactory.

This patient gives evidence of general favorable effect.

† † †

CASE 3.—February 18, 1935. J. D., age seventeen. Severe acne two years. Lesions deep with marked induration. X-ray considered advisable. Given viosterol, twenty drops daily.

March 4, 1935. Distinctly better. Unable to afford x-ray.

March 22, 1935. Letter stating, "Getting along fine. Face much better."

April 9, 1935. Letter stating, "Feels much better, and face looks 100 per cent better."

This patient gives verbal evidence of enthusiasm.

† † †

CASE 4.—March 16, 1934. C. D. Severe acne vulgaris of the face for three years. Past history was negative. Mother had acne. X-ray considered advisable. Given lotio alba cream and viosterol, twenty drops daily.

April 27, 1934. Much better.

June 25, 1934. Better; a few pustules with last menses; appetite better; has gained weight.

June 8, 1935. Has been much better, but recently has relapsed moderately. X-ray advised. Given x-ray, sixteen treatments, with complete healing.

This patient demonstrates improvement with partial relapse, but also a slow response to x-ray treatment. This patient would be a slow result with either treatment. The response to viosterol is favorable, however.

CASE 5.—August 13, 1934. A. C., age 21. Acne, moderately, four years. Has had one and one-half years of x-ray treatment by dermatologist elsewhere. Healing unsatisfactory. Menses irregular, and is constipated, high-strung, and nervous. Was given viosterol, twenty drops daily.

September 14, 1934. Better.

October 13, 1934. Doing well.

November 10, 1934. Healed.

The above case demonstrates healing with viosterol after failure with x-ray.

CASE 6.—August 3, 1935. M. R., age twenty. Severe acne, with scarring, for six years. Had fifteen x-ray treatments by dermatologist elsewhere without healing. Given viosterol, twenty drops daily.

September 30, 1935. Much better. Gained five pounds. May 25, 1936. Having no lesions. Taking forty drops of viosterol daily.

September 28, 1936. Still healed.

Illustrative of healing after x-ray failure.

CASE 7.—June 16, 1936. R. K., age twenty-six. Acne since age fourteen; cystic type. Given viosterol, forty drops daily. On July 10, reduced to thirty drops.

September 18, 1936. Gained six pounds. Has more vigor, larger appetite, sleeps better. Practically healed.

The above patient demonstrates an undoubted response.

CASE 8.—November 28, 1936. M. W., age twenty-one, male. Cystic abscesses back of the neck. Given viosterol, twenty drops daily. Advised that x-ray probably would be necessary.

December 11, 1936. Appetite much better. Lesions absorbing. Takes twenty drops daily.

January 8, 1937. Much better, absorbing.

March 5, 1937. All lesions healed.

The above patient demonstrates an exceptional result from what is commonly a resistant form.

CASE 9.—February 29, 1936. F. F., age seventeen. Severe acne for four years on face and back; has considerable scarring. Tires easily, otherwise in good health. Given viosterol, forty drops daily; also iron.

April 18, 1936. Some flare-up with menses.

May 23, 1936. Feels a lot better generally; about 80 per cent improvement.

July 18, 1936. Relapsing. Is living in very hot climate. X-ray advised, and was given thirteen treatments. Healed.

March 4, 1937. Moderate recurrence.

The above patient demonstrates healing followed by relapse on change of climate in spite of excessive sunlight, healing with x-ray, with subsequent partial relapse.

CASE 10.—October 27, 1935. N. D. M., age twenty-four. Deep cystic acne on face of several years' duration. Given viosterol, twenty drops daily; also hydrochloric acid.

November 19, 1935. Two pustules only. Viosterol increased to forty drops daily.

February 18, 1936. Splendid result. Complete healing.

November 2, 1936. Did not take viosterol during summer and has relapsed. The patient requests x-ray treatments. X-ray was given; twelve treatments, with complete healing.

The above patient demonstrates complete healing with viosterol, with subsequent relapse, followed by healing on a normal amount of x-ray treatment.

CASE 11.—August 17, 1936. A. C., age twenty-one. Acne for five years; deep pustular type. Given viosterol, forty drops daily.

October 17, 1936. Viosterol reduced to twenty drops. About the same.

November 24, 1936. Acne completely healed. Skin oily.

February 11, 1937. Still healed.

The above patient demonstrates the healing of acne without influence on the oiliness of the skin.

COMMENT ON AUTHOR'S SERIES

My study has taken me through all of my acne cases since 1930. I discarded from my list those patients that failed to report back for a sufficient period to be studied. My total survey comprised 480 cases. The cases eliminated because of incomplete or confusing factors brought the survey down to 255. Of these, 123 patients were treated by means other than the use of viosterol, and 132 on viosterol; 86 were treated with x-ray. The dietary instructions were identical in both series. The patients were instructed to eat plenty of green vegetables and lean meats, preferably rare, with fruits for dessert. The local applications were also identical, being lotio alba or the similar paste-like cream. In a few instances other factors, such as iron or hydrochloric acid, were added because of an existing anemia or digestive disturbance. Of those receiving viosterol the dosage was started at twenty drops each morning. Of these, in many patients the dosage was later increased to forty drops. Eighty drops a day were used on two patients. The reason for the morning dose was to take advantage of the influence of sunlight on the synthesis of vitamin D in the skin.

By testing, I found that the average dropper delivers about thirty drops to a cubic centimeter. The patient received twenty to forty drops daily, a few receiving eighty. The dosage averaged probably 5,000 to 14,000 units at a dose. Those on the higher dosage may have healed more promptly in a few instances.

It is unfortunate that on starting the use of viosterol I did not expect the good results I later observed. I, therefore, have had to rely on a tabulation made from my remarks on each patient's history. I believe, however, that, if anything, they belittle the actual results, as my satisfaction with the procedure has been complete.

I am not going to present this long series of cases because the tabulation would be boresome to you. If any of you are interested in surveying the charts, they are available. The following data were kept on all these cases: age, duration, sex, menstruation, constipation, physiological factors, local treatment, general treatment, dosage of viosterol, x-ray treatment, observation at one month, observation at three months, total observation, and final remarks. Specimen tabulation is seen on this slide. The results of this tabulation are as follows:

TABLE 1.—*Patients Treated With X-Ray Without Viosterol*

Not noted one month.....	12
Unimproved at one month.....	45
Better at one month.....	29
Unimproved at three months.....	17
Better in three months.....	30
Much better in three months.....	13
Healed at three months.....	26
	33%
	33%
Satisfactory in three months.....	48%
Healed, final note.....	56 63%
Relapsed.....	21 25%
Unsatisfactory throughout.....	20 23.3%
Total number of cases treated with x-ray.....	86

TABLE 2.—*Patients Treated With Viosterol*

Not noted one month.....	0
Unimproved at one month.....	6
Better at one month.....	87
Much better at one month.....	38
Healed at one month.....	1
 Total cases viewed at one month.....	132
Unimproved at three months.....	10
Better at three months.....	8
Much better at three months.....	20
Healed at three months.....	32
 Satisfactory in three months.....	75.6%
Total viewed at three months.....	70
Unfavorable on viosterol.....	2
Viosterol cases requiring x-ray.....	3
X-ray advised at the first visit found to be not necessary later.....	9
Relapsed.....	1

It is interesting to note in this series that 100 per cent more patients failed to return after one visit, when x-ray was advised, than when viosterol was prescribed. It will also be noted that I have made a direct comparison only with cases treated with x-ray; the only difference in treatment in this series being through the use of x-ray in one series, and viosterol in the other. Although the number of cases surveyed was considerably greater than those shown, the elimination of the non-x-ray cases has brought the total down to 204.

SUMMARY

I believe I may say that at no time in my dermatological experience have I felt such complete satisfaction with a treatment as I have with the cases of this series. I know that vitamin D is an imperfect weapon to slay this disfiguring disease, but it undoubtedly gives one a feeling of being well defended. From the patients' viewpoint, it has left little to be desired, as they find themselves improving, both in appearance and in general well-being. Many have expressed the sentiment, "Never felt better."

IN CONCLUSION

Briefly, I wish to mention some fortunate side-observations in patients presenting other skin diseases. Two cases of localized scleroderma healed completely. Three patients with alopecia areata grew their hair without other treatment. Psoriasis gave me the impression of improving more rapidly. One patient, a generalized exfoliative case of this disease shown to the San Francisco Dermatological Society at the height of eruption, has stayed well without a spot for a year. One case of old x-ray atrophy improved 100 per cent, and one severe pernio was similarly relieved. Three out of four cases of granuloma annulare healed completely.

I recognize that there is much that is intangible in this paper, as personal impressions are apt to be erroneous if enthusiasm is a persuading factor. I have, therefore, examined very critically those cases that were seen before viosterol was being regularly prescribed, and was given only where a "tonic" was considered to be good "policy." The results in these instances were the cause of my future enthusiasm. I have also recorded, in many

instances, the enthusiasm of the patients, especially in letters received later. The percentage of cures and marked improvement is still low. Perhaps the dosage is not optimal, or that large doses of calcium should also be used. The other vitamins may further add to success. The wrong tree may have been chosen to bay around and another factor of greater importance missed. I believe that all these things are to be weighed, and that time and usage will bring this out. It is my intention to attack these problems in turn, and hope to report again when a sufficient number of cases have accumulated.

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DISCUSSION

GEORGE V. KULCHAR, M. D. (450 Sutter Street, San Francisco).—The well-controlled series reported by Doctor Maynard suggests that large doses of vitamin D are more effective in the treatment of acne than x-ray. The percentage of satisfactory results, both immediate and permanent, secured with roentgen therapy in his series is considerably less than that usually obtained, and may be due to the most severe cases requiring x-ray therapy. Most observers report from 80 to 95 per cent of satisfactory results with roentgen therapy (McKee, Andrews), and less than 10 per cent of relapses. Unsatisfactory results, including relapses, are due usually to inadequate dosage. By careful preliminary testing, adjustment of dosage, and watching for early evidences of reaction, x-ray therapy in most instances can be carried out to 1200-1500 R doses without injury to the skin. It remains our most effective treatment for acne.

The acne form dermatoses result from a disturbance of the pilosebaceous apparatus. This may be due to external irritation from oils, tars, or gases, or hematogenously by allergens, products of the tubercle bacillus, or the halogens. Their effect on patients with acne vulgaris is well known. It is reasonable to suppose, as Sulzberger and others have suggested, that some hormonal stimulation of the pilosebaceous apparatus, resulting in the comedone formation, is an important factor in the genesis of acne. The persistence of activity in the sebaceous gland, an invagination of the epidermis, with the secondary invasion of bacteria, results in the acne lesion. Similar keratinizing metaplasia in the pilosebaceous apparatus has been reported by Lowenthal and by Frazier, and Hu in vitamin A deficiency, with the production of comedones over the face, and in numerous instances acne which disappeared on restoring the vitamin A content of the diet to normal. The histological similarity of the lesions reported by these observers to the involuting acne lesion is striking.

Because of this I have used vitamin A in 55,000 unit doses daily, in addition to amounts of D equivalent to those used by Doctor Maynard. My patients have not been so well controlled and many received x-ray therapy in addition. Aside from the "tonic" effects, I have been impressed with its value. However, the percentage of satisfactory results in patients not receiving x-ray have been considerably less.

The combination of vitamin A with D may have the advantage, as suggested by the laboratory studies of Gross-Selbeck, of decreasing the toxicity of the latter.

It is only through such well-controlled and extensive studies as Doctor Maynard has made that effectiveness of

vitamin therapy in management of acne, where so many factors are involved, can be determined eventually.

*

HENRY J. TEMPLETON, M.D. (3115 Webster Street, Oakland).—Several years ago I treated a few cases of acne by means of viosterol. Because of failure to note improvement, I abandoned the treatment. I must state, however, that I kept no careful records of my results and that I did not control the experiment. Moreover, my dosage was five to ten drops a day, which may have been inadequate.

Having heard Doctor Maynard's interesting results dealing with a large series of cases, and feeling the need of something to supplement the one remedy that I believe is of definite value, namely, x-ray, I will resume viosterol therapy in selected cases.

As Doctor Maynard has stated, any favorable action of viosterol on acne might well be due to its influence upon the calcium metabolism. We can recall that calcium has been claimed to have been of value in acne when given intravenously. The well-recognized fact that sun baths are of value in acne may be due to their synthesis of viosterol in the skin. What relationship this bears to the pigment-producing mechanism of the skin, I do not know; but it is my experience that the value of sun bathing and ultra-violet light therapy (excluding cases treated by heavy exfoliating doses) is directly proportional to the amount of tanning produced. Acne in the blond patient who freckles and peels but who cannot be tanned, does not respond as well as in the brunette. I should like to ask Doctor Maynard as to whether or not he has noted any difference in results in blond or brunette patients with viosterol?

*

NELSON PAUL ANDERSON, M.D. (2007 Wilshire Boulevard, Los Angeles).—Doctor Maynard has given us the result of his experience in the therapy of acne vulgaris with vitamin D. This line of therapy should especially appeal to the physician who is continually requested by acne patients to prescribe some general tonic or blood medicine. It would seem advisable, however, to remember that, from a scientific standpoint, the most satisfactory results in medical treatment are those developed for conditions whose etiology is known. In other words, all rational therapeutics is based upon cause. Our knowledge of the etiologic background of acne certainly leaves much to be desired. Personally, I feel that the true etiology of acne has an endocrine basis, but am perfectly frank to admit that at present all treatment of this nature has been unsatisfactory. It may well be that vitamin D, in its regulation of calcium and phosphorous metabolism, also effects changes in the endocrine glands, and that these functional changes in turn act upon the sebaceous glands which are involved in acne vulgaris. The fact that vitamin D apparently benefits acne vulgaris is to me of much less importance than the question of how it produces its benefits.

TRAUMA AND MALIGNANCY*

By EDWIN I. BARTLETT, M.D.
San Francisco

DISCUSSION by George D. Maner, M.D., Los Angeles;
Alson R. Kilgore, M.D., San Francisco.

A BELIEF that malignant disease may result from trauma is so prevalent that approximately 100 per cent of the laity and most of the profession have come to look upon trauma as a causative factor. Not many years ago not only the ignorant, but the majority of the more intelligent classes accepted without question trauma on the head in infancy as the cause of insanity. Today trauma as a causative factor in malignant disease is accepted without question, and the doctor is "on the spot" indeed if he is so careless as to express an opinion

* Read before the Industrial Medicine and Surgery Section of the California Medical Association at the sixty-sixth annual session, Del Monte, May 2-6, 1937.

to the contrary. In taking histories on patients with malignant disease, invariably the patient volunteers the information regarding the trauma which caused the disease. Occasionally, when the patient is unable to remember a particular trauma, he apologizes for being so ignorant and unobservant. Where these ideas come from it is not altogether clear, but they must originate, in part at least, from the rather loose teachings of former years, and court decisions too often based upon the rather glib testimony of members of our profession. Of more recent years the profession itself, in the more scientific circles, have come to the realization that there may not be such a close relationship, and has learned to approach the subject with an open mind. The courts also have become awakened to the situation, and have accepted certain rules and regulations laid down by the students of pathology of tumors.

CAUSATIVE FACTORS OF MALIGNANT DISEASE

A study of this problem leads one immediately to the consideration of the causative factors of malignant disease. There are many interesting theories, the most popular, today, being that there is a loss of control or balance among the cells of the body. This loss of control might be a change in the particular cell which enables it to escape from under inhibiting influences which normally keeps it in place, or it may be the loss of the inhibiting properties of cells which maintain control, thus allowing a cell with normal growing tendencies to proceed to develop without any inhibitions at all. Granting that one or the other of these theories is correct, we are then led to the consideration of how this comes about. Investigations in this direction have favored a general acceptance of the theory that there is a change in the physiology of the body, probably chemical, which makes an individual susceptible to the development of malignancy, or there is the existence congenitally to some unbalance in the physiology of the body. But this does not explain why a malignancy should develop at any one particular place. To answer this question, one must seek for some strictly localizing determining factor, or tissue disturber. Trauma being the commonest and an easily understood tissue disturber, one would naturally look upon injury to tissues as the most likely factor in determining the exact site of the malignant development. When one considers, however, the very great frequency of traumas, many of them violent in the extreme, and the relatively infrequent instances of malignancies, one must approach the subject with only the greatest of misgivings, and with the mental admonition to exert extreme caution lest one be led astray.

SINGLE DIRECT VIOLENCE AND MALIGNANT DISEASE

The relationship of the single direct violence with the development of malignant disease for many years was admitted, but in recent times, beginning with the critical analysis of James Ewing and his about-face, the pendulum has swung to the other extreme, and students of this subject are of

the opinion that very rarely indeed do the facts bear out a scientific conclusion that the single direct violence is a factor in any sense in the development of malignant disease.

REPEATED TRAUMA AND MALIGNANT DISEASE

The relationship of repeated trauma to the development of malignant disease must be admitted, especially if one includes under the heading of trauma, long-continued irritations by chemicals, etc. Repeated direct violence possibly does result in rare instances in malignancy. One instance in the author's experience of repeated direct blows to the nipple, in a male of cancer age, was associated with the development of a cancer of the breast at the end of an approximate five-year period. The rarity, however, of such an occurrence should definitely limit the development of malignant disease from this cause to a rare occasional occurrence, and there should be in the history a record of continual soreness or repeated abrasions to the skin, or other evidence that the trauma was causing disturbance in the tissue at the exact site of trauma.

STIMULATION TO MALIGNANT GROWTH

The stimulation to a more rapid growth and possibly to a more primitive or malignant type of lesion by trauma, single or multiple, cannot be denied, inasmuch as it has been repeatedly observed that cutting into a malignant disease produces almost immediate increase in local spread and early metastasis. This stimulation to more rapid growth must be in the nature of an opening of channels for the escape of cells locally or into the circulation, and an increased vascularity attendant upon the reparative process which follows the wounding of tissues. Trauma may accomplish this stimulation to malignancy, therefore, provided there is a break in the continuity of the tumor and surrounding tissues, or provided it constitutes a major form of irritation which produces a high degree of vascularity. Obviously, therefore, minor traumas in this connection cannot be taken into account, and the major traumas only can be considered.

The stimulation of benign tumors to become malignant must also be admitted, provided a given benign tumor is capable of becoming malignant. For instance, a benign pigmented mole invariably takes on malignant changes following any form of trauma which interrupts the integrity of the surrounding tissues or sets up an inflammatory reaction among the normal surrounding tissues. Also an intraductal papilloma of the breast, which sooner or later becomes malignant, might take on malignant degeneration when the requirements above mentioned are fulfilled.

Among the bone tumors there is one, and probably only one benign condition which may be excited by severe trauma, and that is the chondroma. Such a tumor, either central or external, has a strong tendency in middle age to take on a more primitive form and malignant invasion. In earlier life, however, such tumors may spread locally, but maintain the same type of adult cell wherever the cartilage cells become spilled into surrounding

tissues, or wherever there is a break in the wall of the surrounding tissues through which the cells may wander. Trauma, therefore, must be considered in this type of growth when all the requirements are met and the age of the patient is favorable.

MEDICO-LEGAL PHASES

From the medico-legal standpoint in any given case there have been set up certain requirements which must be met in order to establish a reasonable supposition that trauma has played a part in the malignant process in question. These requirements have been discussed at great length in innumerable contributions, and the subject is so well known to every member of the profession that the enumeration of these factors would be superfluous. On the other hand, a limited discussion of each point, from the standpoint of the scientific value, might not be amiss in the view of the obvious confusion which exists in the minds of the profession regarding the value of each point in drawing medical scientific conclusions.

In order of their importance, one would place, first, a positive diagnosis of the presence and nature of the tumor. While it may seem absurd to lay emphasis on this point, all too frequently cases come up for discussion which have been the subject of lengthy reports and have even come up before the courts without positive proof of the nature of the tumor. Not always is a tumor mass a malignancy. It may be benign, or it may be a secondary tumor transplanted from some distant focus, or it may be a tumor which, because of its nature, could not possibly have been related in any way to trauma.

The integrity of the wounded part prior to the alleged trauma must be established. This requires that the evidence must be indisputable. Not infrequently a woman of cancer age comes with a tumor, and a history of trauma which she believes was the causative factor, because she did not find the tumor prior to the trauma. Investigation reveals a fair-sized carcinoma which could not possibly have developed in the few hours, days, or weeks following the trauma. Another illustration is the injury to a limb: x-rays taken as a routine for the possibility of a fracture reveal a bone cyst. No relationship can be possible, regardless of the history, inasmuch as the man is thirty-five, and these tumors do not develop after twenty.

The authenticity and adequacy of the trauma is not a problem for the doctor. The history must show a mark, or the development of an hematoma or the development of an ecchymosis, or some equally indisputable finding to prove the exact site of trauma. A minor trauma could not produce this picture, so the trauma must be far above the average in severity.

The tumor must develop at the site of the trauma and not at some distant part. This fact is obvious to the most primitive minds, and yet there are many instances related in the literature of attempts to establish a relationship of trauma on one part of the body to tumor development at another site. The only possible way in which there could be a relationship is through the trauma acting in the capacity

of an agent, which alters in some way the body's general resistance to malignancy. Such a change in the chemistry or physiology which results in a nonresistant individual has never been proved. Even a trauma—physiological, chemical, mental or otherwise—which produce very marked changes, such as loss of weight, weakness, anemia, or any other gross debilities, cannot, even as a secondary factor, be related to malignancy developing elsewhere in the body.

The interval between the time of injury and the appearance of the tumor can only be of significance when it coincides with the microscopic findings. The same is true as regards the rate of growth. A slow-growing tumor of low malignancy cannot be fitted into a history of a tumor appearing within a week or two after trauma. On the other hand, a rapidly growing tumor with primitive cells cannot fit into a history of a tumor developing a long time after trauma. This last point is the most difficult problem of all for the medical man to decide, provided the chronological history is indisputable. Perhaps no one is capable of answering this question correctly in every case, but surely the only one capable of even approximating the truth is the man who has had a great deal of special training in all forms of malignancy.

In the event of a doubtful or a not positively proved instance, responsibility must lie with the patient. Without positive proof, scientific conclusions are valueless and are never accepted as scientific factors, and as doctors and scientists, at least nominally, it is our duty to judge in these medico-legal situations from the purely scientific standpoint. We are not the judge nor the jury. We are simply witnesses. While it invariably is true that our sympathies are with the patient, and while we may feel as the majority of the human race feels, that the individual should have the advantage against a corporation, still we have no right to allow our prejudices to influence in any way our scientific conclusions.

In spite of the truth of these facts, which I am sure everyone present will admit, we must confess that too many of the medical testimonies are based on other than scientific conclusions. This is because some members of our profession will testify to almost anything to help win a case to satisfy the ego or to collect a fee. Some of us are just too human, and are constitutionally unable to allow our minds to draw conclusions unbiased by our sympathies. A large majority of us are simply trying to solve scientific problems without the proper scientific background. There never will be a remedy for this situation until it is recognized by our profession and by the courts that there is a difference in value in the testimony of scientific import. Perhaps it is not too optimistic to look forward to the time when our profession will consent to the selection of a panel of competent scientists, and the courts will recognize these individuals and no others, as the proper authorities for testimony where these scientific matters are involved.

490 Post Street.

DISCUSSION

GEORGE D. MANER, M. D. (657 South Westlake Avenue, Los Angeles).—This discussion shall be confined to the causal relationship of single trauma to malignant tumors; for the question of the relationship of repeated or continuous trauma to neoplasm is too complex to be adequately debated in so short a time. To those interested in the subject it is suggested that they consult the excellent résumés of Ewing, Mock and Ellis, Knox and others.

Unfortunately, there exists in the mind of the profession considerable confusion as to the causal relationship of single trauma to malignant tumors; this is probably because the earlier concepts were based mostly upon clinical observations. As our knowledge relative to the natures of malignant tumors and their natural history advances, it behooves us to revise these concepts and apply more strict scientific criteria.

It is the unanimous opinion of competent pathologists that single trauma never produces a malignant tumor in previously normal tissue. There is no conclusive experimental evidence that a single trauma either can aggravate or stimulate the growth capacity of a malignant tumor, determine its metastatic dissemination or fix the site at which metastases may eventually localize.

This subject is one of vital importance to industrial surgeons because of claims "based upon" tumors allegedly developing after injury. For their information the postulates of Mock and Ellis are listed:

1. Reasonable proof of a trauma of sufficient seriousness to cause definite tissue changes: (a) the injury must be reported within a reasonable period after its occurrence. (b) The examination and condition of the traumatized tissues must be reported by a physician within a reasonable period after the injury.

2. The developing neoplasm must be at the same site as the original injury, and must involve some of the tissue which, without reasonable doubt, could have been involved in the original trauma.

3. Definite evidence must be produced to prove that no neoplasm existed at the site of the injury prior to the accident.

4. In addition to the history of trauma, there must be a history of definite bridging signs, such as persistent swelling, an unhealed wound, or additional anatomical disturbances which connect the trauma with the malignant growth; subjective symptoms, such as complaints of pain, tenderness or weakness, are impossible to evaluate or visualize and, therefore, must not be considered competent evidence.

5. The time which has elapsed between a given trauma and the development of a malignant tumor need not be considered, if the foregoing conditions have been present; however, it is safe to say that a malignant tumor that develops within two weeks after trauma existed prior to it.

6. A preexisting malignant tumor may be aggravated or accelerated in its growth by a trauma, or the trauma may be the first factor to call the patient's attention to the tumor. Treatment should be instituted at once to eradicate the tumor, or at least to prolong the patient's life. Under our present laws, which provide for compensation in case of aggravation of an existing condition by trauma, the employer or his insurance company would be held responsible for this treatment, provided aggravation could be shown, and would be forced to pay for the permanent disability that might follow. He should not be held responsible for the subsequent death of the patient due to malignancy, for the trauma could not aggravate to the point of fatality a preexisting condition which already positively doomed the patient. Nor should he be held responsible for hastening the death, for this point could only be one of speculation on the part of the medical profession.

7. In the case of a metastatic or secondary tumor developing at the site of trauma, the first four postulates must be met before the employer is held responsible, and such responsibility should be limited to the treatment of the local condition; it should not be extended to include responsibility for the death that is bound to occur shortly, as the trauma could not have aggravated the primary growth.

¶

ALSON R. KILGORE, M. D. (490 Post Street, San Francisco).—Until the actual cause of malignancy is demonstrated we shall probably be unable to prove positively that

mechanical injury (as distinguished from chemical or other forms of injury) has nothing to do with it. But I think we must agree with Doctor Bartlett that the trend of informed medical thought is more and more toward this conclusion. Mechanical injury is extremely common and the incidence of malignancy following it so small as to be explainable on the basis of coincidence. It is significant that no authentic case of skin epithelioma following a single blow has been observed. And the modern knowledge that carcinogenic agents must act over long periods of time makes it appear highly unlikely that a single blow can have any relation to tumor origin.

About stimulation to more rapid growth and metastasis—it is true that incision into certain forms of tumor, or incision through them into healthy tissue, will cause more rapid growth and spread; but it is worth emphasis that incision and contusion are by no means comparable. Experimental evidence has shown that mechanical crushing or contusion of tumors is as likely to be followed by regression as by increased growth.

BELIEVE-IT-OR-NOTS IN UROLOGY*

By WIRT B. DAKIN, M.D.
Los Angeles

DISCUSSION by Robert V. Day, M.D., Los Angeles; Carl Rusche, M.D., Hollywood; Edward W. Beach, M.D., Sacramento.

WHILE trying to deliver a large hypernephroma, its attachment suddenly gave away, and the large kidney tumor rolled off onto the floor and, after several bounces, came to a halt in the supply room. Doctor Ballenger says, "We dodged, and expected to see a fountain of blood, but we have yet to see the blood. There was an uneventful recovery."—Edgar G. Ballenger, Atlanta.

A girl, aged fourteen, had a ureter inserted in the fibers of the vesical sphincter, causing pyoureter and pyonephrosis, which had formerly been diagnosed as pyelonephritis. Voided specimens contained pus, whereas catheter samples were always without pus. Explanation: Pus got out of the aberrant ureter only while the vesical sphincter was relaxed during urination.—Charles R. B. Crompton, Toronto.

A patient, aged seventy-two, sought relief from mild indigestion. Abdominal palpation revealed a large, hard tumor on each side of the abdomen. Routine gastro-intestinal series showed perfect casts of the pelvis and calices of each kidney from extensive calculus formation.—Archie L. Dean, Jr., New York.

This contributor states that, of all classes of people, musicians are the most susceptible to urinary calculi. He believes that this is undoubtedly due to the fact that they avoid drinking water before working hours, so as to keep the bladder empty.—Ralph L. Dourmashkin, New York.

* Title used by special permission of Robert Ripley.
The author is indebted for each anecdote to the doctor whose name follows each paragraph.

Read before the Urology Section of the California Medical Association at the sixty-sixth annual session, Del Monte, May 2-6, 1937.

Eighteen days after a nephrotomy for kidney abscess, the entire kidney came out through the wound: autonephrectomy.—Wilbur H. Haines, Philadelphia.

For a year and a half, a patient had pain in the right kidney region, accompanied by chills, fevers, and pus in the urine. He had been operated at the beginning of the symptoms for appendicitis. Two days later the symptoms returned, and a diagnosis of renal stone was made; the stone was thought to have passed, but the symptoms persisted. A diagnosis of pyelitis was made by another physician, and then the patient came into the hands of the contributor of this unusual case. Briefly, an examination revealed a kidney almost functionless on the affected side, with a marked hydronephrosis. At the nephrectomy, unusual difficulty was encountered in severing the ureter, and much to the amazement of the surgeon, a Garceau catheter was found to have been lost by someone, and the cause of the patient's illness was discovered.—Nathan G. Hale, Sacramento.

A traumatic rupture of a solitary kidney was treated successfully without operation. Later studies revealed that it was the only kidney.—Augustus Harris, Brooklyn.

A patient had a kidney stone with a wooden toothpick as a nucleus. He stated that he often chewed toothpicks, and the doctor believes that it may have sloughed through from the bowel.—Herbert H. Howard, Boston.

Anuria, after a hysterectomy, was treated with diuretics for four days, but no urine. Cystoscopy, even with indigo carmin, failed to reveal any ureters. There were no signs of uremia, but on the twelfth day, when the surgeon was about to interfere operatively, and when he was undoubtedly about crazy, one more diuretic was tried, namely, salyrgan. That night, 4,000 cubic centimeters of urine passed. Believe-It-Or-Not, the patient was at no time very uncomfortable.—Michele V. Iovine, New York.

New stones formed, with severe colic, three months after operation. They were again removed and in two weeks there was another severe renal colic, and the x-ray showed new calculi forming. Two months later, five different shadows in the pelvis were seen on the x-ray plate, and two in the lower calyx. Three months later, almost six months from the last operation, several additional calculi were found on the x-ray plate. From then on, a series of x-ray examinations revealed the astonishing fact that the patient was forming a *calculus a week*. The kidney function was good, there was a tendency to fusion of the calculi, no further colic, and additional surgery was deemed inadvisable until later, when a nephrectomy would undoubtedly be necessary.—Joseph A. Lazarus, New York.

X-ray showed an apparent stone shadow, which indicated operation. The operation was twice deferred, and the cause of the x-ray shadow was found to be a nonpigmented mole.—*Gordan F. McKim and Parke G. Smith, Cincinnati.*

A woman simulated a kidney colic and claimed to have passed a stone. She carried her own calculi; they were pieces of brick, fusiform in shape. Believe-It-Or-Not, examination revealed that she actually had a stone in each kidney pelvis.—*Nelse F. Ockerblad, Kansas City.*

A patient passed a giant ureteral calculus, nearly two inches long and one inch in diameter, weighing six and one-quarter grams. The process evidently consumed several years, and the patient had no morphin or cystoscopic treatments to help him. The stone was removed from the bladder by a cystotomy, and the patient apparently was none the worse for the experience.—*W. T. Briggs, Lexington, Kentucky.*

The severing of a ureter during hysterectomy was not recognized at the time of operation. Extravasation resulted, with infection. The ureteral plight was diagnosed with retrograde injection of opaque solutions into the ureteral orifice. The extravasation was drained by lumbar incision, but nephrectomy was impossible because of the patient's poor condition. But, Believe-It-Or-Not, the patient recovered completely, and later cystoscopic study revealed spontaneous anastomosis of the ureter.—*Ralph L. Dourmashkin, New York.*

A patient had a large ureteral stone with colics for three years. She refused to let anyone in America operate on her. Finally, she traveled to Berlin to see Israel, but, on the cart going into the operating room, she passed the stone.—*William G. Exton, New York.*

A prostatic, aged one hundred and one, upon being brought to the operating room, seemed to be much worried and quite uneasy. Upon being questioned, he stated he was upset that morning and wished to defer the operation. He was disturbed about his "boy," he said; he had just received word that he was ill with pneumonia. The urologist asked, "How old is your boy?" and the patient answered, "Eighty years old."—*A. E. Goldstein, Baltimore, Maryland.*

A patient with symptoms, supposedly of appendicitis, upon being cystoscoped, revealed a date-sized stone protruding from the left—not the right—ureteral orifice. Stone removal cured the appendicitis.—*Julius W. Kleinboehl, Milwaukee.*

A man with a ureteral calculus had a ureteral catheter passed, left in place a short time, and, upon

withdrawal, the ureter was lubricated with oil. The patient was told to report to the office in a week. He did, and while telling the doctor he had been without symptoms, he was voiding in three glasses. The patient's stone passed in the third glass and he has always believed that the doctor loaded the glass.—*Sidney Olsen, San Francisco.*

A girl with typical appendicitis symptoms for four months had urine containing a few pus cells. The right ureter was investigated, and found to have a stricture with a hydronephrosis. With dilatation, all symptoms disappeared.—*William E. Stevens, San Francisco.*

A bladder tumor looked cystoscopically like a gumma. A Wassermann was four plus positive. Luetic treatment was advised, and the bladder growth was to be observed from time to time. One month later, an intestinal obstruction developed; laparotomy revealed the ileum attached to the bladder. In freeing the mass, an abscess was opened, which contained a gauze sponge that must have been left there thirteen years before. The abscess communicated with the bladder. Death followed five days later. The bladder tumor was really a granuloma.—*James F. Balch, Indianapolis.*

A man, aged thirty-five, had had urinary difficulty for over a year, and for six months had been obliged to use a catheter. There was always intense pain before and during an attempt to void. His previous examinations by several doctors had included urethroscopic and cystoscopic observation, and the case puzzled everyone. Finally, additional consideration included a Wassermann. This was positive, and he was placed immediately on intensive treatment. He began to feel better the same day; in four days he urinated normally, and has had no further difficulty.—*Wirt B. Dakin, Los Angeles.*

Cystoscopy revealed a large stone in the vault of the bladder suspended from a suture. It somewhat resembled a swinging ceiling lamp.—*Ralph L. Dourmashkin, New York.*

A patient with incontinence for twelve years refused to wear a urinal, and had used a wooden screw in the external urethral orifice. This orifice was thick, and threaded to fit the wooden plug.—*William G. Exton, New York.*

During a litholapaxy, a Ravich instrument jammed, and the operator was obliged to do a cystotomy to remove not only the stone, but the instrument as well.—*Abraham G. Fleischman, Des Moines.*

A woman had been treated for thirteen years by a physician, and with home remedies. Finally, ad-

mittance to the hospital revealed that she could not be catheterized. Diagnosis: A calculus the size of a fetal head, filling the entire bladder.—*C. W. Louis Hacker, Albany.*

A two and one-half pound bladder stone was removed suprapublically.—*H. Fay H. Jones, Little Rock.*

A woman of sixty-five had had five unsuccessful operations to close a vesicovaginal fistula. She entered the hospital with severe pain in the left abdomen. She had a large stag-horn calculus in the left kidney, and voided all urine through the fistula. She refused any operative interference. One year later she reentered the hospital with dysuria and pain in the bladder. She had not passed any urine through the fistula in several months. Cystoscopic examination revealed a collar-button calculus in the fistula, which closed it quite effectively. A small loose calculus was removed from the bladder. She appears from time to time for removal of small loose calculi.—*Louis Orr, Orlando, Florida.*

A gauze sponge, overlooked during a salpingectomy, sloughed into the bowel and thence into the bladder. It was removed cystoscopically, and catheter drainage was employed for two weeks, with a cure. At first, fecal matter passed through the catheter.—*C. H. deT. Shivers, Atlantic City.*

A douche nozzle, six inches long and one-half inch in diameter, was removed from a woman's bladder. The lady insisted that she had swallowed it.—*Frederick H. Cole, Detroit.*

A patient with a large prostate had a foreign body in the bladder. X-ray was negative, but cystoscopy revealed some sort of a foreign body encrusted with lime salts. Cystotomy was performed, and the body was found to be a piece of the illustrated section of a newspaper. Upon unfolding the paper and brushing off the salts, the picture of a beautiful nude woman was revealed.—*Ernest G. Mark, Kansas City.*

A porcupine quill was evacuated from the bladder during an irrigation. The University of California Biological Laboratory stated that it was not only a porcupine quill, but one from the tail of the beast, and submitted two quills to prove the assertion. The patient explained that while out for a walk with her dog, he had engaged in a battle with a porcupine, and in her endeavor to separate the animals, she had received several quills in her leg.—*Albert M. Meads, Oakland.*

A husband, in endeavoring to take his wife's temperature per vagina, lost the thermometer in the bladder. The doctor cystoscopying the case, be-

cause of the favorable position of the thermometer, was able to read the temperature through the cystoscope. When this was observed, the doctor said to the husband, "Since you are so damned anxious to know what this girl's temperature is, I can tell you. It is 99.6 degrees." This is a new method of taking temperature—cystoscopically. Believe-It-Or-Not.—*H. W. Scott, Fort Dodge, Iowa.*

A stone containing a gold watch chain was removed from the bladder. The case was diagnosed cystoscopically as a vesical calculus, and roentgenologically as a stone containing a watch chain as a nucleus.—*Fedor L. Senger, Brooklyn.*

A woman sat on the porch darning socks. She put the needle into her mouth to get some more thread. Her sister made a funny remark, she opened her mouth to laugh, and swallowed the needle. For months she had severe pains in her stomach, and then only occasional pains in various parts of the abdomen. Seven years later she began to have frequent and painful urination. I passed a cystoscope, saw the needle sticking into the bladder, caught it with forceps and removed it through the urethra, with complete relief of pain.—*Hugh H. Young, Baltimore.*

A patient, fifty-nine years of age, had had a celluloid ball in the scrotum for thirty-four years without symptoms. It had been placed there at the time of an orchidectomy for cosmetic purposes.—*Benjamin S. Abeshouse, Baltimore.*

A patient who was a religious fanatic, castrated himself with a pocket knife. He nearly bled to death before the doctor arrived and ligated the vessels. The patient justified his act with a well-known quotation from the Bible.—*John E. Hall, Miami.*

A new etiological factor in nonspecific urethritis: a patient tried passing an icicle in lieu of a sound.—*James B. Cross, Buffalo.*

A man, aged sixty-two, had had very tight anterior urethral strictures for years. Dilatations had become so painful, and results so unsatisfactory, that in desperation he amputated his scrotum and penis with a razor. Bleeding was controlled by an ordinary piece of cloth. Three days later, when the doctor first saw the patient, his condition was good. Since the operation he had voided without difficulty through the perineum. He appeared to be normal mentally, and explained that so long as he was impotent anyway, the operation seemed to be the best way out.—*Alexander H. Peacock, Seattle.*

A traumatic urethrocystostomy was discovered at cystoscopy. Treatment, expectant; result, cured.—*A. G. Rytina, Baltimore.*

Years ago, an organ grinder in Barnum and Bailey's circus consulted the doctor because of a penile ulcer. The patient explained that, because of his occupation, he had been unable to carry out the proper treatment. At his own special request, he was allowed to remove the adhesive plaster and several yards of bandage. Before completing the job, bandage, penis, and all came away. He looked pitifully at the lower part of his abdomen, and all he said was, "It's too bad, isn't it?"—Edgar G. Ballenger, Atlanta.

A patient with severe pain in the right side had some urinary disturbance. X-ray showed a dense shadow about the line of the pelvic right ureter. Ureteral catheter passed in contact with the shadow, which was denser than the usual urinary stone, and of unusual shape. Believe-It-Or-Not, the operation revealed a dermoid cyst of the right ovary, containing one tooth, fully formed except for the roots.—R. Campbell Begg, Wellington, N. Z.

A papilloma of the skin caused a shadow on the x-ray plate to be erroneously diagnosed as renal calculus.—William R. Delzell, New York.

A dermoid cyst was removed from behind and slightly above the bladder. It had cast a shadow on the x-ray plate, and was thereby very nearly mistaken for a vesical calculus.—William S. Ehrich, Evansville, Indiana.

An aneurysm of the internal iliac artery was very nearly opened by mistake for a distended bladder.—A. W. Hunter, Vancouver.

John, aged seventy, had a prostatic resection and left the hospital on the sixth day, returning to his hotel. Not having heard from the patient, and being somewhat concerned about him, the doctor called at his rooms the next day, only to find a strange woman in bed with him. John is now treating for gonorrhea, and seems proud of the fact that he was capable of acquiring it under such adverse circumstances.—W. Ray Jones, Seattle.

Doctor Kearns reports what he believes to be an autoprostatectomy. Rectal examination revealed an enlarged prostate. There were toxic symptoms of diabetes and two quarts of retention. Catheterization and insulin therapy were instituted at home. There was an abscess of the epididymis with evacuation of nearly a quart of pus. Two weeks later there was acute prostatitis, high fever, chills, and intense perineal pain, but the patient continually refused hospitalization. After eight days of this, there was a spontaneous rupture of the abscess into the bladder, and voiding of large amounts of pus, followed by relief. He was observed during the next five years, with no urinary symptoms; the

prostate was small and firm. He died at the end of five years from diabetic coma.—Walter M. Kearns, Milwaukee.

Doctor Player reports an unbelievable expense from an industrial accident case. A crushing injury resulted in, among other things, paraplegia and loss of both anal and vesical control, necessitating retention catheters. This condition existed for fifteen years, until the patient died of a pyonephrosis. Believe-It-Or-Not, his hospital expense was almost \$25,000; nursing expense, nearly \$15,000; and doctor bills, nearly \$4,000: a grand total of over \$43,000.—Lionel O. Player, San Francisco.

Doctor Pomeroy once had a patient by the name of O. Bills, and, Believe-It-Or-Not, he never paid one.—Edward S. Pomeroy, Salt Lake City.

An old negro with carcinoma of the testicle was advised operation, but refused. After listening to possibilities and probabilities, he scratched his head and said, "Boss, does Ah git you right—if Ah isn't operated, dis ole nigger is goin' to die, and if Ah is operated, Ah, don' live much longer nohow?" Upon being told that this was about the case, he replied, "Well, let's jes' leave 'em on then, for looks' sake."—Jesse U. Reaves, Mobile, Alabama.

A woman with urinary symptoms showed a wire hairpin in her bladder with a plain x-ray. Cystoscopy was negative. A second x-ray film showed the pin in the same position. Vaginal and rectal examination was negative. Explanation: The cassette used with the first two x-rays had a hairpin stuck on some adhesive cement. With the third film, a different cassette was employed.—Clarence C. Saelhof, Chicago.

A woman with a marked degree of frequency, all of whose urological examinations were negative, was relieved in a most unusual way. Noticing in a medical journal an article by an eye specialist, who claimed he had relieved many cases of frequency by refracting the patient's eyes, Doctor Sargeant thought he would try it on his patient. Only a moderately defective vision was found, but she obtained relief. He would have her leave her glasses off for a few days, and the frequency would always return.—James C. Sargeant, Milwaukee.

An imperforate hymen in a girl, age thirteen, caused a retention of twenty-five and one-half ounces of menstrual fluid, and this, in turn, symptoms of a kidney or ureteral condition. Cystoscopy and x-ray examination demonstrated pressure on the left ureter, with a temporary hydroureter. A general surgeon decided that it was a pyonephrosis, and advised that the left kidney should be drained for five or six weeks, and then a secondary nephrectomy performed.—Parke G. Smith, Cincinnati.

A man, eighty years of age, with urinary incontinence for several years before and after a prostatectomy, was cured by doses of whole pituitary gland extract and mixed treatment tablets. His blood and spinal fluid Wassermann were negative.—*Paul R. Stalnaker, Houston, Texas.*

A man with paralysis agitans, eighty-six years old, and weighing eighty-seven pounds, had a thirty-six ounce prostate removed suprapubically. He had catheterized himself for twenty-five years.—*George W. Stark, Syracuse, New York.*

Because of loss of weight, vomiting, and a palpable mass in the kidney region, a diagnosis of carcinoma of the kidney was made. Urological examination was negative. Later, after a difficult defecation, a strip of gauze protruded from the rectum. This was removed, and found to be fifty-two inches long and eighteen inches wide. It had been overlooked at a gall-bladder operation six months previously. The patient recovered.—*E. O. Swartz, Cincinnati.*

A blacksmith, ninety years of age, who had learned his trade at the age of eleven, and who did not retire until he was eighty-seven, attributed much of his good health to the use of tobacco: he had chewed since he was four years of age, and had smoked continually since he was a young man. For thirty-five years, he had catheterized himself three to seven times daily—approximately sixty thousand times—until suddenly one day, a five-inch piece of catheter broke off in his bladder. His technique was also interesting: he applied lubricating jelly with his unwashed hand, and usually washed the catheter in soap and water after using it. He had only a mild degree of cystitis, was very active, and in excellent health.—*Howard L. Tolson, Cumberland, Maryland.*

A child, four years old, presented a glans penis which was severed from the penis except for a fine cord which contained the blood supply. An unintelligent mother explained that one year previously she had fastened a hairpin on the foreskin in an attempt to do a circumcision. The surface of the glans and penis were healed as though a clean incision had been made. The doctor stitched the glans back in place, reestablished the urethra, and obtained good results.—*William P. Willard, San Francisco.*

A patient complained of frequent and painful urination. X-ray showed three shadows in the region of the bladder, one of which contained a pin. Cystoscopy showed but one stone, which was crushed and evacuated. A lateral cystogram located the other two shadows in the rectum. Operation revealed a fistula between the lumen of the appendix and the extraperitoneal cavity on the right side of the bladder, in which was the stone contain-

ing the pin. The other stone was in the tip of the appendix and it was formed of the same salts. This is apparently the only authentic case of a urinary calculus within the lumen of the intestinal tract.—*Burnett Wright, Los Angeles.*

523 West Sixth Street.

DISCUSSION

ROBERT V. DAY, M.D. (1911 Wilshire Boulevard, Los Angeles).—Doctor Dakin has certainly gone to a lot of pains, and expended a great deal of energy in assembling these interesting and bizarre case reports. All are unique and instructive as well, and are attested by outstanding authorities, so there can be no doubt of their authenticity. The paper is so trite, yet complete, that there is little left for a discussant to add, except to highly commend him for his presentation.

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CARL RUSCHE, M.D. (906 Taft Building, Hollywood).—One is immediately impressed with the amount of time and energy expended in accumulating such a large number of unusual case reports. I do not know of any place in the literature where such a list of unique cases can be found. I wish to compliment Doctor Dakin for his medical originality, and trust that he will continue to publish this unique accumulation of material.

May I solicit others to contribute their unusual urologic cases in order that the Doctor Dakin "column" may be perpetuated.

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EDWARD W. BEACH, M.D. (Medico-Dental Building, Sacramento).—Dr. Wirt Dakin deserves the plaudits of the profession for having created and developed his original idea of "Believe-It-or-Not in Urology" items, after the manner of Ripley and with the latter's full permission. This interesting feature of the urological program, which was inaugurated several years ago at the annual meeting of the American Urological Association, has now become international in scope, and its yearly advent is eagerly anticipated by many of the members.

Doctor Dakin painstakingly collects his data from near and far, and then arranges the material in such a way as to relieve the tedium contingent upon the presentation of a large number of very scientific essays in a very brief period of time, as is the custom of conventions. By reason of these "Believe-It-or-Nots in Urology" a considerable degree of warmth, sparkle, zest, mirth, intimacy, and general good feeling is imparted to an otherwise stilted, formal, and coldly scientific atmosphere. The case presentations are, likewise, both educational and instructive.

Perhaps another reason for the popularity of "Believe-It-or-Not in Urology" items is that they often treat directly of the human equation in the medical problem. Thereby they touch a responsive chord in the breast of every physician, for above all others by nature of his calling, the physician must, like Abou ben Adhem, love his fellow men. Anything, therefore, which deals with the human factors—the frailties, the oddities, the perversities, and the general incomprehensibility of human nature in its relation to actual problems encountered in the practice of medicine—finds instant appeal to the physician everywhere. After all, the physician's problems are fundamentally the same, regardless of geographic location.

Perhaps no contribution better illustrates the truth of the celebrated Hippocratic aphorism, "Life is short, and the art long; the occasion fleeting; experience fallacious, and judgment difficult." Moreover, these compilations of Doctor Dakin's but serve to illustrate the aptitude of Whetham's little poem, to which each physician with due humility must subscribe:

"But beyond the bright searchlights of science,
Out of sight of the windows of sense,
Old riddles still bid us defiance,
Old questions of Why and of Whence."

Let us hope Doctor Dakin will continue with this excellent work.

THE LURE OF MEDICAL HISTORY[†]

PURKINJE'S PIONEER SELF-EXPERIMENTS IN PSYCHOPHARMACOLOGY*

By P. J. HANZLIK, M.D.
San Francisco

PART II**

THUS Purkinje's unusually clear description and correct interpretation of these interesting side actions of digitalis, over a century ago, are strictly in accordance with those of the present day and will probably hold for all time. Today records of these side actions on vision in the clinical use of digitalis are a commonplace, but their relationship to the drug's actions was not suspected or recognized until 1925, when they were rediscovered and brought to the attention of the medical profession. While these side actions are important clinically as a warning of beginning toxicity from digitalis, the so-called "minor toxicity symptoms," for Purkinje they were essentially manifestations of a disturbed physiology. He proved by his experiments that digitalis did not create directly those flickerings in the eye, but rather indirectly by mediation through some other physiological function; in this case nausea and emesis. For drugs do not create new physiological functions; they only affect those existing. Thus, Purkinje was always intrigued by other means or possibilities of probing deeper into an understanding of physiological function. He was probably well aware that he was laying down at the same time a more secure foundation for pharmacology. His drug experiments were not mere by-products of physiology. This seems to be indicated in his most interesting paper entitled, "Einige Beiträge zur physiologischen Pharmacologie," published in 1829.⁷ It deals with interesting effects from drug combinations, which I may discuss next.

SELF-EXPERIMENTS WITH DRUG COMBINATIONS

In his paper on physiological pharmacology, Purkinje has declared his preference for self-experiments in pharmacology. His object is to reveal all actions, especially the subjective, which cannot be tested on animals. First, he determined results with some individual drugs which entered into certain combinations.

Camphor.—After taking 6 grains (0.4 gram) of gum camphor by mouth, Purkinje experienced only an oppressive burning sensation in the stomach, but 12 grains (0.8 gram) caused him to remain in bed. About fifteen minutes after the initial gastric irritation, he felt a sensation of warmth of the entire skin, and nerve irritation was marked, especially

[†]A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

* Sigma Xi address, University of Nebraska, Lincoln, Nebraska, February 16, 1938.

From the Department of Pharmacology, Stanford University School of Medicine, San Francisco.

** Part I of this paper was printed in CALIFORNIA AND WESTERN MEDICINE, July, 1938, on page 52.

in muscle and skin nerves, with prickling of skin. Sensitivity to external environment was decreased somewhat, with a sensation of hairiness. Respiration was unusually easy and free. His mental activity was increased considerably, so that thinking seemed to be clearer. A camphor euphoria was experienced, spiritual thoughts and consciousness being increased. The leading spiritual thought was that man in his being was a superman and his calling was the liberation of his brothers.

His whole life was laid before him without a relationship to his presence, which he believed completely overlooked. This state lasted one and one-half hours, and then was lost in ordinary thoughts and duties without the slightest feeling of anxiety. Afterward, his head was not the least affected, which, however, is the case after other kinds of euphoria or sprees. This experiment was not repeated, but he thought it would be interesting and important to know if a state of exalted feeling occurred in different individuals. Probably the exalted state would soon be lost. To him it seemed important that this experience was not unlike some forms of insanity. The action disappeared rapidly just like ether, nitrous oxide and other volatile agents. It was remarkable to him that no trace of action remained afterward. Excretion of camphor occurred in the lungs and sweat, and a trace in urine. The blood apparently took up the drug and brought it to the brain and nerves. He suggested that the external temperature may cause a significant difference in the action of camphor when the skin and pulmonary volatilization is retarded.

In a final experiment with camphor, Purkinje took at once two scruples (40 grains, or 2.6 grams) with the same subjective experiences. There was also increased muscular activity, movements being easily executed, but the muscle power was unchanged. He was unable to concentrate while writing. No religious exaltation was felt as in the first experiment. He lost consciousness of his personality, felt exhausted, and required orientation with surroundings, but all this was lost in a stream of peculiar thoughts. The sensations were like those of a drunkard who calls himself names, mutters, and has moments of normal behavior. He states that he expectorated camphor in saliva and sputum. The subjective sensations increased to the point of emesis which, however, did not materialize. An hour appeared an inordinately long time, as in a dream. A similar experience was observed by Kant in his ripe old age, when an hour's walk seemed to be a long journey.

Opium Nostras.—Purkinje tested this opium because it was reported to be one-fifth as strong as the oriental variety. In a small quantity it acted to prevent the stupor of wine. He suggested that perhaps this action explained its effectiveness in delirium tremens.

Belladonna.—Half an hour after Purkinje took twenty drops of an extract of belladonna on sugar, there was dryness of the nose and mouth. There was a feeling of anxiety in the precordial region and sometimes the pulse was full. Contractions were felt in the urinary passages, and urine was scanty. Beef soup tasted sour, and afterward there

was a peculiar taste of senega. This was not due to the food eaten, because other dietary articles gave the same sensations. Dry bread tasted peculiar when chewed. These peculiar oral sensations were due to absence of saliva and mucus, their presence contributing normal sensations. All actions of belladonna were due to the decreased secretions.

A hypochondriac individual, whom Purkinje knew for some time, experienced the same sensations as did Purkinje after the belladonna. So he tried treatment of this state with homeopathic doses of belladonna and thought he observed a beneficial action in a way which, however, could have an explanation in the variability of the disease.

Stramonium.—This drug gave similar effects to those of belladonna, with this difference, that an alcoholic extract of the seeds caused depression, that is, a narcotic action. This he had never observed with belladonna, but both drugs caused dilatation of the pupils. Today stramonium is used in excitatory states, like Parkinsonian disease and the like.

Turpentine, With and Without Alcohol.—First, Purkinje took one dram (60 minims, or 4 cubic centimeters) of turpentine on sugar every morning with unpleasant sensations in the alimentary tract, but he could sleep off the effects with one hour's sleep daily. He slept better both day and night, there being quieter and calmer sleep after turpentine. He thought it might be used as a hypnotic in certain cases.

He felt an unusual experience when he took a glass of wine with the turpentine, which was not felt after wine alone. An unusual euphoria occurred, due not to a specific action, *i. e.*, previous depression of the central nervous system by the turpentine, and the action lasted several days. With pure turpentine a dizziness occurred, but not after taking a mixture of alcohol and ten drops of turpentine. He thought this mixture might be suited to some individuals under treatment (alcoholic intoxication?).

Narcotic Action of Oil of Nutmeg.—Purkinje's results with turpentine suggested trials with this volatile oil. One morning he ate a nutmeg with sugar, which was not unpleasant; yet he felt a weariness and a sense of depression which lasted a whole day, though not disturbing mentally. But he noticed, after taking a small glass of table wine, that the nutmeg affected him very much.

One afternoon, after dinner, Purkinje ate three nutmegs. The action came on rapidly. There was marked sleepiness with pleasant dreams, which were disturbed occasionally by some restlessness. Finally, he laid down on a sofa to sleep. He states: "At half-past six (in October), when it was almost dark, I woke up in order to go to the Royal Theater in Brüder Street (Berlin) where I lived. The distance was long, but this time I thought it had *no end*. My movements appeared entirely adequate, but were lost momentarily in dream pictures, from which I had to extricate myself with considerable force in order to keep on walking. My feet did their duty, and, since I had to stick to a straight road, there was no danger of going astray. I went

forward in this dream, for, if I attempted to orient myself, I could not even recognize the cross streets. Time seemed long. I got to the opposite side of the place where I was going. During this time dreams and physical activity battled one another. The return journey was good, and I slept well that night and next day." *But the wine acted on him more powerfully than usual for several days.*

In his next experiment, Purkinje rubbed up two drams (120 grains, or 8 grams) of nutmegs with pure brandy and drank the extract; the action was different. Instead of a quiet narcosis, there was muscular restlessness and dizziness. This was due to an internal action of the nutmeg in this combined form. This oil, turpentine, and all volatile oils act on the cerebrum and cerebellum. Combined with alcohol they affect the motor functions more, so that the actions of aqueous and alcoholic mixtures should be different. Pharmacodynamically, the action is less chemical than on the organism, *where an agent increases the disposition to the action of another drug*. He regretted that he could not investigate the effects of coffee or tea on different drugs, because his scientific interests became diverted. But Purkinje had no doubt that observations in this field would throw light on many problems. Equally important was a cautious attitude which he expressed. He said that the few experiments he could make should be repeated on a large number of individuals so as to give a correct general result; this, in order to establish subjective results as soundly as the objective, and not leave them merely empirical.

As regards Purkinje's self-experiments with nutmeg, essentially the same symptoms in the early stages of nutmeg poisoning were described seventy-eight years later by the late Professor Cushny,⁸ who was apparently unaware of Purkinje's description. Two years after Cushny's report, Dale,⁹ who reviewed reports of clinical actions and poisoning from oil of nutmeg, and undertook experiments with the oil on cats without success, also did not refer to Purkinje's self-experiments. In his Alpha Omega Alpha Lecture on Leeuwenhoek in 1933, before the California-Stanford chapters, Professor A. W. Meyer, professor of anatomy at Stanford, discussed certain pharmacological experiments with nutmeg on mites by this microscopist; he also referred to them in a recent article.¹⁴ Mites were exposed to pieces of nutmeg in a glass tube; these would approach the nutmeg and then rebound as they came closer. If they remained very close, they died (narcosis and paralysis?). This was about 1676, so that Leeuwenhoek preceded by something like 153 years Purkinje's self-experiments with nutmeg.

COMMENT

To return to Purkinje's results with drug combinations, he seems to have been the first one to recognize that drugs can affect each other's actions. In other words, Purkinje discovered the allergic state. More than that, he demonstrated it on himself. He actually showed a sensitization on himself to two drugs as the result of taking another drug. That is, an habitual glass of wine (weak

alcoholic beverage), without action itself, increased his reactions to turpentine and to nutmeg. This can be regarded as a case of potentiation of action on drugs by another drug. Besides making a clear demonstration of allergy, Purkinje also suggested the correct explanation of the phenomenon. He concluded that these drugs did not react with each other directly, and thus did not alter their actions in a chemical sense, but that the changes were produced by some effects on physiological functions. What apparently puzzled him was that a drug whose action was no longer expressed could still influence the actions of other drugs so markedly. However, this puzzle is still unsolved today. Nevertheless, it must be granted that Purkinje demonstrated long ago that conditions influence the actions of drugs, something now universally recognized, but he is never credited with this discovery.

EXPERIMENTS ON CILIA

Before closing, I cannot forego the mention of Purkinje's original pharmacological experiments on cilia in 1835.¹⁰ These were done with his favorite pupil, Valentin. In this work there are presented a table and discussion of results with fifty-five chemical agents and drugs which acted on ciliary motion. Among other phenomena, Purkinje and Valentin recognized that organic acids (acetic and others) affected cilia more quickly and readily than inorganic acids (HCl and others). Eighty years later Olmsted and MacArthur¹¹ described exactly the same differences; in fact, used the same acids on frog cilia without apparently being aware of Purkinje's and Valentin's experiments. The only difference was in the method of expressing the strength of the acids, *i. e.*, use of pH by Olmsted and MacArthur. Purkinje made this clever deduction: Since hydrocyanic acid and strychnine do not poison cilia, these structures do not belong to the central nervous system. Another deduction in a similar vein, but having nothing to do with cilia, was as follows: Frogs killed with narcotics are not entirely dead, since the muscles and nerves of their bodies respond to direct stimuli. This was really clever for those exclusively anatomical days. As a result, Purkinje was called a "physiological anatomist."

IN CONCLUSION

It can be said of Purkinje what has been said before by others—the genius of the great master, Purkinje, has remained undeservedly obscure. And what do you suppose this self-effacing supermaster of physiology is reported to have said on New Year's Day, 1869, the year of his death (age, eighty-two years)?

"I have indeed discovered various things, but, as for immortality of my name, this should not be taken literally. A hundred years hence perhaps only a few will know who Purkinje was. But that makes no difference. For indeed we do not know who discovered the plow, and yet it serves all humanity. The cause remains the same, but not the name—and that is the important thing" (Hykes¹²).

Sacramento and Webster Streets.

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CLINICAL NOTES AND CASE REPORTS

PSEUDO-PROPTOSIS FROM SUBCONJUNCTIVAL TUMORS

By HOWARD E. CLARK, M.D.
Monterey

MUCH has been written about false exophthalmos due to orbital tumors and its diagnostic complications. Here is a case of subconjunctival lipomas with a desiccating keratitis.

REPORT OF CASE

Mr. Ira B., colored, age fifty-one, was referred to the Monterey County Hospital on November 1, 1937, with a diagnosis of bilateral tumors of the lachrymal glands. He complained of failing vision in the right eye, with excessive weeping of several weeks' duration. The patient stated that the eyes had always been prominent, but that the swellings on the upper and outer portions of the eyeballs had been noticeable since 1918.

There had been no symptoms referable to the eyes until the present complaint. No severe illnesses or childhood diseases were remembered. Vision had always been good and the eyes had never been examined. Venereal infection was denied.

Examination:

Vision: Right, 20/65. Jaeger iii at 15 inches. Left, 20/20. Jaeger ii at 15 inches.

There was a marked proptosis in both eyes, slightly more on the right. The lids were very loosely applied to the globes. Lachrymal glands were easily seen projecting slightly below the orbital rim. Both eyes showed a yellow-



Fig. 1.—Subconjunctival tumor in right and left eyes.

ish subconjunctival mass about the size and shape of a forefinger tip extending downward and medially, from the lower margin of the lachrymal glands to a point one and one-half centimeters from the limbus. The upper and outer margins were not visible, apparently extending back into the orbit. The right cornea was roughened and stained slightly with fluorescin. The fields were normal. The fundi were fairly well seen and were normal.

The Hertl exophthalmometer showed: R. 22, L. 20. Blood and urine negative.

Basal metabolism: Plus 23.

Pulse: 70, regular. B. P. 124/72.

Course.—November 23, 1937: The right tumor mass was dissected out without difficulty. The mass was a comparatively nonvascular, yellowish tumor, one and one-half centimeters wide and two centimeters long. It extended a narrow pedicle into the orbit. Biopsy showed fatty tissue only.

December 4, 1937: The left was operated upon with similar findings.

December 14, 1937: Both conjunctival wounds were well healed. The weeping had stopped and the patient was comfortable. The cornea were clear, showing no staining reaction with fluorescin.

February 3, 1938: Vision—Right, 20/30; left, 20/20. Distance vision not improved with correction.

With the exophthalmometer the right eye showed 22 mm., the left 20. The patient was delighted with the improvement in his appearance.

576 Hartnell Street.

HYPEREMESIS GRAVIDARUM:

NOTES ON TREATMENT

By WILLIAM BUSTER McGEE, M.D.
San Diego

THE treatment of vomiting of pregnancy has changed very little in the past few years, in spite of the fact that there have been many advances in our knowledge of the vitamin and hormone deficiencies. Probably vitamins B1 and G are involved more than any of the others. As a

whole, the use of female sex hormones has been very disappointing, with the possible psychic effect of hypodermic injections.

We have divided hyperemesis gravidarum into four clinical groups and, depending on the severity of the case, we decide which form of treatment is to be used. No routine procedure can be successful, as each is an individual problem. The serious cases are started, for about two days, on the severe regimen, intravenous and subcutaneous fluids, with nasal tube feedings, on the third and fourth days, then fifth and sixth days on the vomiting diet, and on the seventh and eighth days a dry diet. The patient may be started on any of the four diets; and, depending on her reaction to the therapy, it may be worked either forward or backward.

I. MILD TYPE

Carbohydrate, 400; protein, 50; fat, 25. Omit liquids one hour before and one hour after meals. Six a. m. and midnight feedings. Dry toast or crackers before rising. Sweetened fruit juices between meals. Ferrous sulphate, grains five, after meals, if anemic. Phenobarbital, grains three-fourths, morning and evening.

II. MODERATE TYPE

Carbohydrate, 400; protein, 50; fat, 0. Dilute HCl, fifteen drops, before meals, if gastric analysis shows low reading.

If pulse is over 90, Lugol's solution, five drops after meals. Phenobarbital, grains three-fourths, given with liquids, three times a day.

Substitute dicalcium phosphate and A B D capsules for milk.

No coitus allowed.

Daily enema, if necessary, for constipation.

Diet for Moderate Type

1. Take solid food at 8 a. m., 12 noon, 4 p. m., and 8 p. m.
2. Take liquids at 10 a. m., 2 p. m., 6 p. m., and 10 p. m.
3. Take any medication with liquids.
4. No fat or greasy foods.
5. Solid foods:
 - (a) Stewed fruits, with plenty of sugar.
 - (b) Cooked or dry cereal, with plenty of sugar.
 - (c) Toast, crackers, corn bread, Graham muffins, whole-wheat bread, with preserves, honey, jelly, molasses.
 - (d) Lean meats, crisp bacon or ham, cheese, hard-boiled eggs; sandwich with toasted bread (no butter or mayonnaise).
 - (e) Baked, mashed or boiled potatoes, baked sweet potatoes, macaroni, spaghetti (plain), rice.
 - (f) Fresh, raw vegetables, such as lettuce, tomatoes, celery, and radishes.
 - (g) Raw fruits, such as bananas, oranges, apples, lemons, and grapefruit.
 - (h) Cooked vegetables, spinach, asparagus, peas, white onions, cauliflower, carrots, beets, corn, and beans.
 - (i) Gelatin, jello, custard, prunes, tapioca, ice cream, and fruit ices.
6. Liquids: Fruit juices (orange, lemon, pineapple, grapefruit), coco-cola, skim milk, tea, ginger ale, and water.

III. MODERATELY SEVERE TYPE

Hospitalize.
Physical and pelvic examination.
Blood count and urine examination (acetone and diacetic acid).
Darkened room and no visitors (including husband).
Absolute bed rest.
Daily enema.
Temperature, pulse, respiration, every four hours.
Measure intake and output.
Insert Levine nasal tube into the duodenum at 7 a. m., which may be removed at 10 p. m.
Make up a formula as follows:

Tube-Feeding Formula

Milk	800 cc.
Lactose	200 gm.
Eggs	4
Peptone	24 gm.
Salt	5 gm.
Cevitamic acid	50 mgm.
Cod-liver oil concentrate	20 drops
Vitamin B1 crystals	2 mgm.

One hour after the tube has been inserted start formula as a slow continuous drip. If vomiting occurs, reinser tube and wait one hour, with the patient on right side before starting drip. Give phenobarbital, dilute HCl, or Lugol's solution, if indicated, through the tube. Maintain the fluid intake up to 3,500 cubic centimeters per day by hypodermoclysis of normal saline or Ringer's solution; or, if acetone and diacetic acid in the urine, 20 per cent glucose by intravenous drip. The glucose may be covered with insulin.

IV. SEVERE TYPE

Nothing by mouth, except small amount of cracked ice. Bed rest; temperature, pulse, respiration, every four hours. Measure intake and output. Transfusion, if hemoglobin is 70 per cent or less, sodium phenobarbital, grains four, hypodermic, then two grains every six hours until drowsy; then every eight hours for two days. Sodium bromid crystals, 75 grains in 100 cubic centimeters of starch water, as a retention enema, the first night. Give 1,000 cubic centimeters 20 per cent glucose infusion twice daily, over a period of ninety minutes. Get CO_2 , urea and NaCl blood chemistry at the time of the infusion each morning; 1,000 cubic centimeters of normal saline by hypodermoclysis twice daily, alternating between subpectorally and in the thighs, always several hours, after the glucose. (Use procain wheal.) Hartman's solution may be added if acidosis or alkalosis is present. Daily urine examination for acetone and diacetic acid. Eye-grounds examination. If no improvement, interruption of the pregnancy should be considered.

233 A Street.

SULFANILAMID: A SPECIFIC FOR THE FRIEDLANDER BACILLUS

By PHILIP KING BROWN, M.D.
San Francisco

ONE case can rarely be considered the ground for drawing so definite a conclusion as the title indicates, but the history of the case makes it remarkable.

REPORT OF CASE

Miss B. K. had her tonsils removed in February, 1917, following which she developed a condition in the right lung which proved later to be an abscess. The abscess was in about the middle of the right lung field toward the back, and was considered to be in the upper part of the right lower lobe. Pleurisy developed under the right shoulder blade. Partly to relieve that pain, and because the abscess did not drain well, the use of a small pneumothorax was attempted successfully, and it was found promptly that the abscess both discharged better and there was no tendency to spread. A moderate pneumothorax was kept up until all discharge ceased, and the lung field seemed to be definitely clearing. The nature of the infecting organism was not determined.

Following the expansion of the lung there developed a slight cough and expectoration, and a lipiodol injection showed that there was a definite dilatation of the large bronchus extending from the middle of the hilus, definitely toward the back in the vicinity of the shoulder blade. The use of the lipiodol relieved the green expectoration for a considerable period of time, although it did not disappear entirely. A fresh cold would increase the amount from one to two drams a day to several ounces. On numerous occasions this was cultured, and a pure growth of Friedlander bacillus was found. In the seventeen years which followed the abscess there continued constantly to be a small amount of expectoration when the patient was quite

well, which was increased decidedly following every cold, and was not relieved until lipiodol was put into the dilated bronchus. There continued to be a slight increase in the pain under the lower end of the right shoulder blade.

The patient all these years worked as a private secretary, but was constantly annoyed by the sweetish-green expectoration which showed so ready a tendency to increase with every slight cold.

In the summer of 1937, after a severe cold, she was instructed to spend two weeks at an elevation of 2,500 feet in a hot, dry locality, doing all she could with postural drainage and iodid of potash. At the end of a week no material benefit having resulted in the way of lessening the amount of expectoration, which was between two and three ounces a day, she was instructed to take sulfanilamid in the following doses: 30 grains the first day, 45 the second, and 60 the third, dropping back to 45 grains, and 30 on the fifth day. At the end of the third day there was absolutely no expectoration, and the pain in her back disappeared. She kept in touch with me, although several hundred miles away, and was instructed to continue taking small doses for a while longer.

Six months have gone by and there has been no evidence whatever of any return of the expectoration. She has had several slight colds, but has promptly taken small doses of sulfanilamid, and none of them have resulted in the productive cough.

COMMENT

The case is reported because the cultures were made by Dr. A. M. Moody, pathologist of the Saint Francis Hospital, during all this period. The result was so absolutely clean-cut that it seems to the writer worth putting on record.

We have since tried the drug once on an arrested case of tuberculosis, with a left upper thoracoplasty which had not completely stopped the productive cough. Friedlander organisms predominated in the sputum and no tubercle bacilli have been found for years. A cautious trial of sulfanilamid was made after a fresh cold which increased the amount of sputum, and again a remarkable drop in the amount resulted at once. As the tendency to the production of fibrosis is one of the characteristics of this organism, the problem presented itself as to whether the removal of one or two more ribs was a safer treatment than continuing the use of this drug. The patient in the meantime was not pressed for any decision in the matter. The newspaper publicity about sulfanilamid disturbed him, and he had no great desire to undergo further surgery.

909 Hyde Street.

NECROPSIES IN HOSPITALS IN SAN FRANCISCO*

By J. C. GEIGER, M.D.
AND
JESSE L. CARR, M.D.
San Francisco

IT has been the custom for some years in certain of the large cities of the United States to survey and report the necropsies performed, together with the numbers credited to each hospital in that locality, and the percentage of permissions obtained. In order to make this information available for use in San Francisco, an effort was made at the beginning of 1937 to collect the necessary statistics with which to formulate a table presenting salient facts relating to necropsies.

* From the Department of Public Health, City and County of San Francisco.

Eighteen of the forty-five hospitals listed in the San Francisco area responded to the questionnaire, supplying information in detail for 1936, and partial information for the previous years. From the data received, the percentage of permission obtained for necropsies is shown in Table 1, together with a more detailed analysis of the data furnished for the year 1936. In that year the capacity of the reporting hospitals was 4,344 beds, and 82,758 patients were treated, and 3,989 deaths occurred. Total necropsies performed, by consent, in these hospitals were 1,331, and the number of cases referred to the coroner's office from these hospitals was 482. Of the cases referred to the coroner, the hospitals have record of forty necropsies performed at the coroner's office. The percentage of permissions obtained for the San Francisco area was 33.3 per cent in 1936, and the average in the past ten years for each of the hospitals furnishing complete data is listed in Table 2.

In computing the percentage of permission obtained for necropsies, the figure taken for the number of deaths is the actual number recorded (not including stillbirths). In one hospital no record of necropsies has been kept. Another hospital reported no facilities for performing necropsies. Two other hospitals reported insufficient data from which to evolve statistical information, and in another no necropsies were performed on consent, presumably because of racial objections. Ten hospitals reported that the pathologist spends full time (six to eight hours per day) in the pathological laboratory within the hospital. Three others reported that the pathologist spends part time (four hours or more per day) in the laboratory, while five others have no pathologist. In all of the

TABLE 1.—*Necropsy Report for San Francisco Hospitals*

Hospitals	Beds*	1936 NECROPSIES			PERCENTAGE PERMISSION										
		Patients	Deaths	Permits	To Coroner's	Coroner's	1936	1935	1934	1933	1932	1931	1930	1929	1928
Children's	259	5,031	119	61	2		51.2	26.4	30.0	48.9	43.7	38.6	37.6	26.7	33.1
Chinese	65	532	67			No necropsies on consent									
Dante						No facilities for performing necropsies									
Franklin		3,840	227	20	18		8.8	11.9	2.8	8.0	2.3	1.7	1.6	1.0
French	225	3,790	159	47	17		29.5	26.4	26.8	29.3	23.4	34.7	20.4	13.4
Garden Nursing Home		152	42			No record of necropsies									
Mount Zion		3,907	206	77	12		37.3	49.1	51.5	49.7	46.4	42.6	36.3	24.1	23.4
St. Elizabeth's		139			6	Insufficient data									
St. Francis		7,038	262	31			11.8	8.1	13.9	13.7	25.0	27.6	28.4	17.3	8.1
St. Joseph's		232	7,058	226	36		15.9	17.4	17.7	21.0	22.2	19.7	21.3	25.0	28.4
St. Luke's		235	5,584	201	85		42.3	30.2	37.2	33.3	32.5	32.0	12.7	21.5	19.0
St. Mary's		335	8,822	258	67		25.9	18.5	11.3	14.7	18.1	13.9	15.8	23.2	17.4
San Francisco		14,251	1,394	515	365		136.9	41.5	43.0	48.2	39.4	32.1	32.9	48.3	23.6
Shriners			4,558	153	68	Insufficient data									
Southern Pacific			9,635	259	140		44.4	31.4	40.3	56.9	55.9	56.2	38.3	34.5	41.0
Stanford		324			14		54.0	56.1	46.1	48.9	58.1	45.5	43.9	38.5	42.4
U. C. Hospital		294	6,262	191	105		13								
Veterans' Administration Facility		326*	2,298	225	79		7								
							35.1	30.2	5.5	Opened September 26, 1934					

* Beds include bassinets except in those hospitals showing a double asterisk (**) .

† These figures are for fiscal years beginning July, 1937.

TABLE 2.—Shows Average Percentage Permission in the Past Ten Years for Each of the Hospitals Furnishing Complete Data.

University of California	58.9
Stanford-Lane	48.1
Southern Pacific	44.3
Mount Zion	40.0
San Francisco	38.4
Children's	37.3
Veterans' Administration Facility	31.4 (2 1/4 years)
St. Luke's	28.9
French	25.4
St. Joseph's	20.9
St. Mary's	17.6
St. Francis	17.1
Franklin	4.7 (8 years)

hospitals, either the pathologist or an assistant under his supervision makes each necropsy, except in rare instances, in which they are performed by certain members of the house staff. All hospitals in San Francisco, with either full or part-time pathologists, have kept permanent records which are available for inspection of gross and microscopic findings in each case. Likewise, the following hospitals report the holding of weekly pathological conferences: University of California, Stanford, San Francisco, French, and Mount Zion. In addition, the St. Francis Hospital reports conferences every two weeks; and the Garden Nursing Home, St. Joseph's, St. Luke's, St. Mary's, Children's, Chinese, Franklin, and the Southern Pacific Hospital report one conference each month.

It will be noted in Table 1 that there has been a gradually ascending necropsy percentage in San Francisco during the past nine years; and, while not shown statistically, the interest in clinicopathological conferences and in pathological teaching has kept abreast of this statistical level.

At present a system of tabulation is instituted in the San Francisco Department of Public Health whereby such figures are available at all times.

Department of Public Health,
Civic Center.

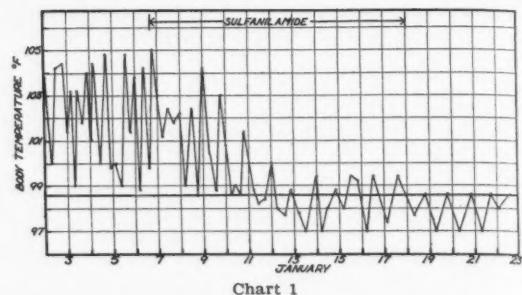
**TYPHOID SEPTICEMIA TREATED WITH
SULFANILAMID**
By W. E. DIEFENBACH, M.D.
AND
ANTON S. YUSKIS, M.D.
La Jolla

BUTTE and his coworkers¹ have found that the survival period of mice infected with many lethal doses of *Bacillus typhosus* was lengthened or they were entirely protected by the administration of sulfanilamid. It is, consequently, of interest to record the effect of this therapeutic agent upon a septicemia in man due to *Bacillus typhosus*.

REPORT OF CASE

History.—A. L., a white man, age twenty-one, was admitted to the hospital on January 2, 1938, complaining of chills, fever, loss of appetite, lassitude, and a mild headache. He had enjoyed excellent health until November, 1937, when he had an attack of appendicitis while in Colorado. An acute respiratory infection postponed operative intervention at that time, but an appendectomy was finally done and a stormy time followed a perforated appendix. He gradually improved, gained in weight and strength, and came to California. His convalescence was satisfactory until January 1, when he felt tired and below par.

¹ Butte, G. A. H., Parish, H. J., McLeod, M., and Stephen-
son, D.: Chemotherapy (Sulfanilamid) in Mice. *Lancet*,
1:681-684 (March), 1937.



Examination.—The patient was well developed, fairly well nourished, pale, mentally clear, and alert. The skin was clear, no rose spots and no embolic or hemorrhagic manifestations. There was no unusual adenopathy. The temperature was 104.6 degrees; pulse 100; blood pressure, systolic 104 and diastolic 60. There were no abnormal findings in the head, neck, thorax or extremities. There was a recent scar in the right lower quadrant of the abdomen. There was no muscle spasm or no abnormal masses felt. Neither the liver edge nor spleen could be definitely palpated. There was no tenderness in either costovertebral angle. The first blood count (January 3) showed: hemoglobin, 75 per cent; red blood cells, 3,700,000; white blood cells, 6,550 with 67 per cent polymorphonuclears, 30 per cent lymphocytes, and 2 per cent monocytes. The urine showed only a faint trace of acetone. Specimens of blood were taken on January 4 for cultures.

Course.—The patient continued to have severe chills—three to four in twenty-four hours—and fever ranging from 97.8 to 105 degrees Fahrenheit for the next three days. His condition gradually became worse. On January 6 the broth culture and one poured plate gave a motile Gram-negative bacillus. Growth on Endo and Russell double sugar media were typical of *Bacillus typhosus*, and eliminated *Bacillus coli*, and *Paratyphoid bacillus*. Motility eliminated the dysentery group. Agglutination test—Antityphoid serum agglutinates, 1:2560. On January 7 we started to give him ten grains of sulfanilamid every four hours. On January 8 the temperature varied from 101.2 to 102.4 degrees Fahrenheit, without any chills. Because of a marked nausea present the next day, the dosage of sulfanilamid was cut down to one-half or five grains every four hours. That same evening he had a severe chill and the temperature rose from 98.6 to 104.2 degrees Fahrenheit. So the next morning, January 10, he was placed again on ten grains every four hours. The patient began to show a marked improvement, as his temperature dropped and the chills did not recur. At the end of a week's treatment the temperature was almost normal, rising to 98.8 degrees Fahrenheit. During the second week of treatment the patient had an afternoon temperature, of only 99.4 degrees Fahrenheit, and showed a marked improvement in his general condition. The sulfanilamid was stopped on January 18. After this his temperature ranged from normal to subnormal. On January 28 the patient was dismissed with a normal temperature.

Examination of the stools and urine failed to reveal the *Bacillus typhosus*. Likewise, the Widal test was negative. Daily blood and urine examinations were made during the course of treatment. Roentgen examinations of the chest and abdomen were negative.

COMMENT

It was our impression that there were two possible explanations for this illness. First, that this may represent a very questionable atypical typhoid fever. Secondly, and more probable, was that the organism was present in the intestinal tract at the time of the peritonitis, and localized to form an abscess possibly in one or more retroperitoneal lymph nodes with a gradual softening and systemic invasion. There was no evidence pointing to liver abscess, subdiaphragmatic abscess, perirenal abscess, para-rectal abscess, nor pyelitis.

CONCLUSIONS

Our brief experience with the use of sulfanilamid in the treatment of a typhoid septicemia leads us to believe that this drug may prove to be of value in the treatment of typhoid fever. The prompt response to treatment, the smooth clinical course, the absence of complications, and that the infection did not progress, together with a reduction in hospital expenses that is usually necessary in the treatment of this infection, have impressed us considerably.

7819 Girard Avenue.

HEMATOCOLPOS DUE TO IMPERFORATE HYMEN

By E. M. BINGHAM, M.D.

AND

W. J. BLEVINS, JR., M.D.
Woodland

THE occurrence of hematocolpos and hematocolpometra seems sufficiently rare to justify a case report. Review of the literature shows that most of the individual cases have been reported from European countries. A complete summary of this condition was presented by Calvin and Nichamin¹ in 1936. They analyzed twenty-six cases reported in the literature, and fourteen cases available from hospital records. It is of interest to note in these cases that 62 per cent were less than fifteen years of age; that the complaint in 58 per cent was urinary disturbance, frequently retention; in 38 per cent, abdominal tumor. The case to be reported here was brought to light by a complaint of amenorrhea.

REPORT OF CASE

L. L., female, age fifteen, a senior in high school, was referred for examination at school by the instructor in physical education, on September 21, 1937. In addition to the complaint of amenorrhea, she stated that in December, 1936, she noticed a small mass in the lower abdomen. This had increased somewhat in size, and was associated with right lower quadrant pain which she and her mother had attributed to her appendix. For the past few weeks there had been anorexia, nausea, and occasional vomiting. Her mother had been concerned about the failure of menstruation to appear, and had been giving her a well-known proprietary compound. The history did not suggest periodic menstrual symptoms. There was no urinary disturbance nor discomfort while sitting, as described in some reports.

Examination showed an undernourished white girl of normal development, but apparently not well. No pathology was found except in the abdomen. The breasts were well developed and pubic hair was normal. In the lower mid-abdomen a visible and palpable tumor was present. This was the size of a four or five months' pregnancy—firm, movable, and not tender. It seemed to be more firm than a pregnant uterus, and no fetal heart tones were heard. The patient was unable to state just when her breasts developed, but her mother recalled consulting a physician five or six years before because one breast was developing more rapidly than the other. She was sent to the Yolo County Hospital for pelvic examination and treatment with a tentative diagnosis of hematocolpos.

Pelvic examination on September 24 revealed a bulging, intact hymen, best described as similar to a small apricot in appearance. This was injected with novocain and a small longitudinal incision made. Dark blood and ropey mucus escaped, estimated as over 1500 cubic centimeters in amount. The tumor receded, and the following day the patient was discharged. Two days later all flow had stopped and she

was permitted to get up. On the evening of September 29 she suddenly started flowing. When seen an hour later, all flow had stopped and apparently only old blood had been discharged. This may have been trapped in the uterus or vagina. She entered the hospital again on October 4, at which time some old blood was found retained in the vagina and the hymen would not admit the tip of a finger. Under gas anesthesia the incision in the hymen was enlarged in a radial manner. On two subsequent occasions she returned for dilatation, at which times the introitus would admit two fingers. She had refused further treatment, and when last examined the introitus would admit only one finger.

The first menstruation occurred on November 5, with normal flow, lasting for six days. Three subsequent periods have been of average flow, interval thirty-three to thirty-four days, lasting five to six days. The first day of each period has been accompanied by backache and rather marked nervous symptoms, which were not present before surgery. General health and color have definitely improved.

This case may serve to emphasize the importance of medical investigation of instances of delayed menstruation. It illustrates, also, the need of wide incision of the hymen if recurrence or stenosis is to be avoided.

Yolo County Health Department.
Yolo County Hospital.

SARCOPHAGID MYIASIS

By F. F. GUNDRUM, M.D.

AND

H. H. KEIFER, B.S.
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THE big, gray flesh-flies, *Sarcophaga*, are common in California. Infestation with their larvae has not been reported from this district; hence, the following case may be of interest.

REPORT OF CASE

Mrs. H. P., white, thirty-two, married, came to the office on October 5, 1936. She had been "feeling miserable all summer, with aches and pains all over." She did not take any treatment. About September 1 she had a tender and painful swelling in the right lower abdomen; this moved to the right groin, then under the thigh, and finally to the left hip, where the "bump opened one night while she was in bed and a worm came out."

Upon examination there was seen to be a clean-cut oval hole, 3 by 2 millimeters in size, on the posterior surface of the left thigh at the junction of the upper and middle thirds; no induration or redness. The offending "worm" was a larva about 20 millimeters long and 6 millimeters in diameter, with a sharpish point at one end and rather abruptly squarish at the other.

This larva was poured down the sewer (much to our distress) by a laboratory "Diener"; however, about six weeks later our patient mailed us a smaller, less well-developed specimen, which had come out of the left leg by its cutting a small, oval hole through the skin. Exit of the worm promptly relieved the swelling and soreness previously distressing.

COMMENT

The maggot, which is nearly half an inch long and rather badly distorted, has been very kindly determined for us by Dr. M. A. Stewart of the University of California as, apparently, *Sarcophaga* sp. It is a Muscoid type, lacking the characteristic spines of the Oestrids and, therefore, not referable to the botfly group. Muscoid larvae of the Sarcophagid group have rather characteristic caudal structures, which are not apparent in this larva, due mainly to the distortion. The rear spiracles are very small, suggesting that the larva is quite immature. We can, therefore, conclude that the species involved is an unusually large fly. (*Wohlfahrtia vigil*, a Sarcophagid which has been taken

¹ Calvin, Joseph K., and Nichamin, Samuel J.: Hematocolpos Due to Imperforate Hymen. *Am. J. Dis. Child.*, 51: 832-846, (April) 1936.

from beneath human skin in the maggot stage, has a larva known to attain a length of slightly over half an inch.)

The Sarcophagids rarely cause human myiasis. There are two or three cases on record in the United States, covering a period of some years (one very recent), in which Sarcophagid larvae were removed from under the skin of infants. The "Review of Applied Entomology" lists a few human records for the past ten years, but these are nearly all Oriental, and are primarily of Sarcophagid larvae in the alimentary canal. Calliphorid larvae (similar flies) also cause human subcutaneous myiasis.

In larval food habit, the Sarcophagids are almost invariably connected with other animals. Some breed in excrement. Many feed on carrion and dead animals. Some are important insect parasites and some are parasites of warm-blooded animals. Insects of this type are continually annoying to the human animal, in one way or another; and the occurrence here recorded, while unusual, is entirely in line with the possibilities.

Medico-Dental Building,
Department of Agriculture.

POLYCYTHEMIA VERA OF THE GEISBÖCK TYPE

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AND
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BECAUSE of the relative rarity of polycythemia vera, and of certain interesting features, the following case is reported as one conforming to the so-called Geisböck syndrome of true polycythemia, hypertension, and absence of splenomegaly.

REPORT OF CASE

The patient, a woman aged fifty-seven, was first seen on March 10, complaining of recurring vertigo, tinnitus, faintness, and visual blurring during the previous week. During this time she had had a hematemesis of an estimated cupful of blood on one occasion. The family history was not significant. The patient had suffered from migraine until the menopause, at age forty-eight. She had had seven pregnancies, unassociated with any toxemia so far as known, all delivering normally at term. There was no history suggestive of a previous glomerulonephritis. Hypertension had been discovered four years ago on routine examination, and the patient had been under the care of her local physician since. Nocturia, two or three times per night, had been present for three years. During the past year the patient, who had been obese, had reduced some forty pounds by diet. General and systemic histories were otherwise negative.

Physical examination revealed a slightly obese woman of stated age, with grey hair and ruddy complexion. The lips were cyanotic and the mucous membranes deeply reddened. Complete dentures were present. The tonsils were small, with chronic infection. The pupils were equal and regular, reacting normally to light and accommodation. Fundus examination revealed considerable narrowing and nicking of the retinal arterioles, with arteriovenous compression; the retinal veins were remarkably distended. A few scattered small hemorrhages were noted, as well as some cotton-wool patches and small areas of hard macular exudate. The discs were normal. The thyroid was not enlarged, and no adenopathy was noted. The lungs were negative, no emphysema being found. The heart was enlarged to the left, all tones were loud, and the aortic second was accentuated. Radial thickening, graded 2, was present; the blood pressure was 220 systolic, and 120 diastolic. Neither liver

nor spleen were palpably enlarged at any time. Diastasis recti was present. The uterus and adnexa were small and atrophic, and moderate cystocele was found. There was no peripheral edema, and all peripheral arterial pulsations were normal. Neurological examination was negative. The provisional diagnosis made was that of Essential Hypertension Group 3 (Keith-Wagener); general and cerebral arteriosclerosis; cardiac hypertrophy; and possible polycythemia vera.

Laboratory findings were as follows: red blood cells, 8,560,000, hemoglobin, 145 per cent (Sahli); white blood cells, 14,500, with 79 per cent neutrophils, 1 per cent eosinophils, 2 per cent basophils, 15 per cent lymphocytes, and 3 per cent monocytes. No myeloid immaturity was found. The platelets on the stained smear were markedly increased both in number and size. The packed volume of red cells by hematocrit determination was 61 per cent. The blood volume (Rowntree-Geraghty) was 240 cubic centimeters per kilogram. The blood Wassermann was negative. Urinalysis revealed a specific gravity of 1.017, a trace of albumen, and a moderate number of hyaline casts. Glycosuria was not present. The blood sugar was 139 milligrams, and the NPN 71 milligrams per cent. Urinary concentration tests showed a maximum specific gravity of 1.016.

Course.—After twenty-four hours of bed rest and sedation, the blood pressure had come to a level of 180 systolic and 100 diastolic, but marked vertigo and tinnitus persisted. A venesection of 500 cubic centimeters was done. On the same day the patient had a hematemesis estimated at 500 cubic centimeters. Vertigo still being marked, and the pressure level remaining the same, another venesection, of 750 cubic centimeters, was done on the third day. Following this, the red blood cells were found to be 6,500,000, hemoglobin 118 per cent (Sahli), and hematocrit percentage 47. Several days later, on being allowed to sit up in her chair, the patient complained of dull substernal pain, radiating down the ulnar side of the right arm. Examination of the heart was negative, and an electrocardiogram showed only left axis deviation, slight elevation of the S-T segments in the first and third leads, and a diphasic T3. In the following days there was no further pain, no fever, and no audible friction rub. On the ninth day the NPN was 41 milligrams per cent, and the patient felt much improved, being up and about the hospital with no further substernal pain save on one brief occasion. Due to the high incidence of vascular thromboses in these cases we endeavored to keep the patient ambulant so long as we deemed it consistent with her cardiac reserve. At the end of three weeks the pressure level had fallen to 130-150 systolic and 80-94 diastolic and vertigo did not recur. Fundus examination showed no change, save for diminution in size of the previously engorged retinal veins. The patient was dismissed from hospital on a regimen of rest, moderate, protein-low salt diet, and sedative medication. Because of the evidence earlier noted of impairment of renal function, it was deemed unwise to attempt control of the polycythemia by phenylhydrazine, which is somewhat slowly eliminated, or by irradiation, in the presence of only slight leucocytosis without myeloid immaturity. Accordingly, it was decided to control the red cell count by periodic venesects, and the patient was instructed to report to the office in two weeks for hematocrit determination, as well as for a gastrointestinal series to rule out any malignant cause for the hematemesis previously cited. At this time the packed red cell volume was 51 per cent and the blood pressure was 190 systolic and 110 diastolic; substernal pain on exertion had been present for several days. The venesection was deferred until later in the week, but the following morning one of us was called to see the patient at her home, and found her in shock, presenting the classical picture of sudden severe coronary occlusion. Death occurred several hours later. Permission for autopsy was not obtained.

COMMENT

A case of polycythemia vera is presented, without splenomegaly, and associated with severe hypertension and renal insufficiency; the immediate response of all three conditions was favorable following venesects. Death occurred suddenly, some weeks later, from acute coronary occlusion.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

HEMORRHAGE FROM THE UTERUS

I. ETIOLOGY

H. N. SHAW, M.D. (901 Pacific Mutual Building, Los Angeles).—At the risk of seeming elementary, I wish to define clearly the terms "menorrhagia" and "metrorrhagia." In the former, excessive menstruation, the flow may be greater than normal in amount, may be prolonged, or may occur at too frequent intervals, but there is no bleeding between the periods. By metrorrhagia we mean uterine bleeding that occurs independently of menstruation.

We shall consider three age periods in this discussion.

1. Childhood to puberty (1 to 14).
2. Child-bearing period (14 to 45).
3. Postmenopausal (45—).

1. INFANCY AND CHILDHOOD:

The commonest causes of bleeding in this period are endocrine disturbances. For example, withdrawal of maternal estrin at birth, ovarian (granulosa cell) or pituitary tumors. Rarely, malignancies of the uterus may be the cause. Systemic diseases, chlorosis, and the various blood dyscrasias are often factors.

II. CHILD-BEARING PERIOD:

The important causes of abnormal uterine bleeding at this time are, in order of their frequency: (1) abnormalities of pregnancy; (2) endocrine disturbances; (3) pelvic inflammations (endometriosis); (4) fibroid tumors or polyps; (5) cancer of the cervix; (6) cancer of the fundus; (7) ovarian tumors; (8) syphilis; (9) blood dyscrasias, cardiovascular, kidney and chest diseases.

1. *Abnormalities of Pregnancy.*—I have placed these at the head of the list, not only on account of their relative frequency, but for their importance from a medico-legal standpoint. There are a great many women coming to doctors' offices giving false histories in the hope of a curettage to end an unwanted pregnancy, or perhaps to obtain grounds for a fat damage suit. A careful history and physical examination will usually rule out the question of pregnancy. In some cases an Aschheim-Zondek test is necessary. Under this heading come intrauterine pregnancies with abnormal bleeding, *placenta praevia*, threatened or missed abortion, ectopic, retained placenta, hydatidiform mole, and the rare *chorio-epithelioma*.

2. *Endocrine Disturbances.*—These must be considered in all cases where there are no definite lesions demonstrable. Study of the endometrium is of vital importance. A fairly frequent cause of abnormal bleeding is the so-called incomplete menstruation. The endometrial fragments not cast off remain and cause an irritation of the new endo-

metrial lining. Minor disturbances, on biopsy, show a more or less normal endometrium, indicating a first-degree ovarian failure. The severe bleedings show a high percentage of cystic hyperplasia, indicating second-degree failure. It may occur with atrophic endometrium, indicating third-degree failure. Other more serious causes must be eliminated before a diagnosis of endocrine dysfunction is made. Some years ago a 34-year-old patient, who had been studied in a hospital, was referred to us from an Eastern clinic. To quote from her physician's letter: "The possibility of an intra-uterine polypus was considered, but nothing definite was found. She seemed to have functional disturbance." On curettage, we found fundus carcinoma.

3. *Pelvic Inflammations.*—Pelvic inflammations, usually of gonorrhreal or puerperal origin, are very common in this age period. Under this heading should be included endometriosis, which can rarely be differentiated from salpingitis before operation. The cause of the bleeding is probably endocrine—an irritative stimulation of the ovary. Curettage in low-grade salpingitis, which cannot be diagnosed by palpation, may light up the process and cause a severe exacerbation.

4. *Fibroid Tumors.*—Fibroid tumors usually cause menorrhagia. Those that cause bleeding are most often submucous, and intra-uterine exploration with the curette may be necessary to make the diagnosis. Fibroid polyps, and mucous polyps of the endometrium or cervical mucosa, are common causes of severe menorrhagia.

5. *Cancer of the Cervix.*—Cancer of the cervix must be considered in any case of abnormal bleeding, especially in the latter half of the child-bearing period. Biopsy should be made of any suspicious area of the cervix. The bleeding varies in amount, and is always venous.

6. *Cancer of the Fundus.*—Cancer of the fundus is more common toward the end of, or after the child-bearing period. It usually causes metrorrhagia, less severe than malignancy of the cervix.

7. *Ovarian Tumors.*—Ovarian tumors, whether cystic or solid, are frequent causes of bleeding. The benign tumors rarely cause it unless they become twisted, but the malignant types usually do.

8. *Syphilis.*—Syphilis should never be overlooked. Gellhorn cites a patient with a negative Wassermann who had endocrine therapy and several curettages without improvement. Radium or surgical treatment were considered. On further questioning it was found that her father had died at forty of cerebral syphilis. Under specific treatment her abnormal bleeding promptly stopped. Two 15-year-old girls with severe metrorrhagia, who had shown no improvement under various endocrine products, were found to have positive

Wassermanns. Appropriate treatment stopped their abnormal bleeding.

9. *Blood Dyscrasias.*—The various blood dyscrasias, cardiovascular, kidney and chest diseases must be considered.

III. POSTMENOPAUSAL:

Malignancies of uterus or ovary are the most important causes of abnormal bleeding in this group. Mild bleeding may be due to atrophic or senile vaginitis, or to ulceration from foreign bodies such as pessaries or tampons.

* * *

II. DIAGNOSIS

JOHN N. EWER, M.D. (411 Thirtieth Street, Oakland).—Diagnosis of a given case of uterine hemorrhage may be extremely difficult or quite simple. Each has its cause, whether or not it can readily be identified by the means at our disposal. Such bleeding in itself is only a symptom, not a disease, and no stone should be left unturned in the search for the cause in any case in which bleeding departs significantly from the normal.

In this discussion, any abnormal genital bleeding of whatever amount, whether hypermenorrhea, polymenorrhea, metrorrhagia, or combinations of these, will be included in the term "uterine bleeding."

A complete history and physical examination, together with indicated laboratory examinations, is a *sine qua non* whenever the cause is not at once apparent. A mere pelvic examination is not enough. Moreover, the indiscriminate trial of various endocrine products without physiologic reasons for their use, and in the absence of adequate efforts at diagnosis, is to be deplored. Every gynecologist has seen valuable time lost in undiagnosed cases of cancer, ectopic pregnancy, polyposis, and other conditions which have been treated in this way. There is a fertile field for the use of these products, often in cases which in former years could only be cured by radical means, but they should be considered only where physiologists have shown them to be indicated.

There are probably causes of uterine bleeding which are as yet not recognized, but such, I believe, are not common.

It goes without saying that every case of abnormal genital bleeding should have a careful pelvic examination, always including visualization of the vulva, vagina, and cervix. Smears should be taken at this time if any evidence of infection exists. If there is possibility of a disturbance of pregnancy, it must be performed aseptically. In case a sizable tumor can be palpated abdominally, auscultation should not be neglected, as fetal heart-tones have at times been heard in "ovarian cysts" or "fibroids," or a pregnancy may coexist with ovarian or fibroid tumors.

It is easiest, I think, to discuss the diagnosis of uterine bleeding according to age groups, such as in adolescence, the period of maturity, premenopausal, and postmenopausal. A working knowledge of the normal physiology as it relates to the female genital tract is essential for the proper understand-

ing of its aberrations; many cases, perhaps more than we now realize, of uterine bleeding are the result of endocrine dysfunction.

Abnormal bleeding in adolescence is usually upon an endocrine basis, due to disturbance in the anterior pituitary—ovary—endometrium relationships. Various special procedures exist whereby endocrine dysfunctions may be discovered, such as blood and urine hormone studies and by pathological study of bits of endometrium removed with the biopsy or suction curette. Facilities for blood and urine studies are often not available, and as yet often incompletely understood; as a rule they must be repeated at frequent intervals, because the values for hormones normally vary at different stages of the menstrual cycle. It is usually simpler to rely on endometrial biopsies. If these are taken at the right times, particularly in cases in which a cycle can be recognized, they will show definitely whether the sequence of follicle ripening, ovulation and corpus luteum formation has taken place.

It must be remembered that in the adolescent such conditions as disturbances of pregnancy, both normal or ectopic, genital sarcoma and ovarian tumors may occasionally be encountered.

During sexual maturity, complications of pregnancy should always be considered first. The date of the last menstrual period and its characteristics should be determined. Threatened or incomplete abortion, ectopic or mole pregnancy must be kept in mind. If in doubt, the Friedman test for chorionic hormone may prove valuable; but it will become negative within one to two weeks after the death of fetal elements.

Any bleeding after a mole pregnancy certainly, or hemorrhage occurring a few weeks following a normal pregnancy or abortion, should be checked by means of a Friedman test to rule out the occasional case of chorio-epithelioma. Here the curette is not conclusive in the absence of positive findings; nodules may be deep in the uterine musculature or in even more remote locations. Furthermore, it is not considered best to disturb these growths if the diagnosis can be made otherwise.

Decidua without chorionic villi, obtained by the curette, is pathognomonic of ectopic pregnancy, but many cases do not show this feature. Retention of secundines is the most frequent cause of hemorrhage postabortion or postpartum.

During this period of life functional bleeding can also occur, but less often than at the extremes of menstrual life. Such bleeding is now regarded as endocrine in nature; diagnosis is made, in addition to the usual history and physical examination, by such procedures as endometrial biopsy, hormone assays and the determination of the basal metabolism. Hypothyroidism, usually not of severe grade, is a frequent finding; it should be specially sought for in all cases.

Most abnormal bleedings during these years, however, have an anatomical basis. Uterine fibroids, particularly those in submucous location, cervical or endometrial polypi, adenomyomata or adenomyosis, account for many cases, and if present will almost always, sooner or later, cause some sort of abnormal bleeding. Subinvolution postpartum and

cervical lacerations may also be responsible. Various types of ovarian cysts, depending upon their endocrine influence or upon the fact they may cause local circulatory disturbance, can cause abnormal bleeding.

Many acute or subacute cases of pelvic inflammatory disease cause hypermenorrhea, and not infrequently metrorrhagia as well. An acute cervicitis often bleeds a little, particularly if traumatized.

The sedimentation rate is of much value in differential diagnosis in many of the less obvious cases, and is not used as often as it should be. The rate is moderately increased in pregnancy, and is fast in acute pelvic inflammatory conditions. It has often settled the diagnosis between salpingitis and tubal abortion, since both conditions usually show the symptoms of pain, rise of temperature, leukocytosis, and a pelvic mass. To most of us, who feel that no case of acute pelvic inflammatory disease should be operated upon, this simple test has been most reassuring. Uncomplicated fibroids and ovarian cysts cause no change in the sedimentation rate.

Toward the end of the period of sexual maturity cases of hemorrhage from the uterus again become more frequent and severe, and again the endocrine factors assume an increasingly important part in their causation. Bleeding at this time, associated with endometrial hyperplasia, can be extremely profuse. Experimental work so far seems to show the ultimate cause to lie in disturbance of production of the luteinizing factor of the anterior pituitary. The endometrium shows a prolonged or increased estrin effect, often to the point of the "Swiss cheese" pattern as described by Novak. Microscopic sections of the endometrium usually furnish the final diagnosis in such cases, but it must be remembered that bleeding can occur at times from almost any type of endometrium.

The question of malignancy appears during the period of sexual maturity, but with increasing frequency as the years pass. Of types of cancer causing genital bleeding, that of the cervix is the most common, but carcinoma of the uterine corpus is being found more and more frequently before the menopause, particularly in women with fibroids. The incidence of cystic and solid carcinomata of the ovary increases as age advances, although the granulosa cell variety is now being reported equally often before the menopause.

Malignancy is usually diagnosed by means of the history and pelvic examination, and confirmed by microscopic examination of tissue. It must be emphasized again that no pelvic examination should be made without the use of the speculum. Biopsy from the cervix can be taken at the office from any suspicious case, with thorough cauterization of the area immediately following. If carcinoma is grossly obvious, however, it is better to defer the biopsy until the time of treatment.

After the menopause most of the causes heretofore mentioned may bring about uterine bleeding, but now malignancy assumes the commanding rôle; endocrine factors, except in so far as they may be present as a result of certain benign or malignant tumors of the ovary, fade into the background.

Most gynecologists feel that every case of metrorrhagia before the menopause, and any bleeding thereafter, should have thorough curettage for microscopic diagnosis, unless contra-indications exist or the cause of the bleeding be readily apparent. Carcinoma of the corpus is almost always diagnosed in this way, and if hyperplastic endometrium is found in a woman past the menopause an ovarian tumor must be ruled out.

In old women with senile atrophy of the genitalia, bleeding, especially after trauma, may come from an adhesive type of vaginitis, but it must be remembered that cancer of the uterus can coexist.

There remain various causes of bleeding from the uterus which may be sought for if the results of examination at any age do not explain its nature. Various cardiac conditions with chronic passive congestion of abdominal organs, certain cases of hypertension, and rarely hepatic cirrhosis, as well as the hemorrhagic types of blood dyscrasias, may be associated with uterine bleeding. Among the acute infectious diseases, pneumonia, typhoid, and influenza, or constitutional disease such as diabetes, scurvy or lues, may be an occasional offender.

* * *

III. TREATMENT

MARGARET SCHULZE, M.D. (University of California Medical School, San Francisco).—The treatment of menorrhagia is one of the most troublesome problems in gynecology. The bleeding may be controlled readily enough, but to do this without destroying functional activity in the young individual or causing sequelae far more distressing to the patient than the menorrhagia itself may at times be exceedingly difficult.

A first essential to the treatment is an accurate diagnosis, and this must include a careful general examination with a survey of the endocrine system, and at least a basal metabolism and perhaps other functional studies. A careful pelvic examination must be done to rule out gross anatomic lesions, and a microscopic study of the endometrium is essential. When the bleeding is definitely cyclic in character but merely profuse and prolonged, an office biopsy without anesthesia may be sufficient; but in all cases where irregularity of the bleeding suggests the possibility of malignancy, and certainly in all older patients, a careful and complete curettage under anesthesia must be done. Nothing can be more reprehensible than the long-continued endocrine or other general treatment for menorrhagia before malignancy is definitely ruled out. In certain cases of bleeding, particularly those due to the so-called incomplete shedding of the endometrium, curettage may be curative, and certainly its results should be awaited in all cases of menorrhagia of recent origin before proceeding to other treatment which may be crippling in its sequelae.

Certain women with menorrhagia may have had bleeding so long-standing and so severe that they are extremely anemic when they first appear. Such patients should be transfused before other types of treatment are proceeded with. Occasionally, in the adolescent, menorrhagia, transfusion may be curative.

Gross anatomic lesions are, of course, dealt with according to well-recognized surgical principles and usually require operative treatment. Bleeding, associated with salpingo-oophoritis which does not respond to the ordinary conservative measures, including bed rest, will usually be controlled by intravenous injections of Congo-red. One injection of ten cubic centimeters of the sterile isotonic solution may be sufficient, but occasionally two or three at two-day intervals are required.

In the treatment of functional menorrhagia, the number of therapeutic procedures which have been introduced is legion—sufficient evidence that none of them is ideal. These methods have been divided by Keene and Payne into seven groups: (1) hygienic measures; (2) uterine stimulants; (3) means to increase coagulability of the blood or to decrease the permeability of the capillaries; (4) endocrine therapy; (5) removal or destruction of the endometrium; (6) roentgen or radium therapy; and (7) surgical procedure upon the ovaries or the uterus. A most important fact, which has been repeatedly emphasized by Frank and has been borne out by observations in our own clinic, is that many of these functional disturbances, even those of severe type, are of transient nature and tend to spontaneous cure, and therefore too radical treatment is entirely unjustified and may do far more harm than good. If the patient, particularly those in the younger age groups, can only be tided over her periods of bleeding for a certain length of time, the condition will tend to correct itself.

Hygienic measures include the relief of dietary insufficiency, particularly that of protein and of vitamin C, the correction of secondary anemia and the removal of focal infections.

Uterine stimulants, including pituitrin, ergot preparations, extracts of hydrastis, and stypticin, may help tide the patient over periods of active bleeding, although they do nothing to influence the underlying condition.

Blood coagulants and endothelial stimulants have been used too recently, and in series too small to permit a final evaluation, although excellent results have been reported in about two-thirds of the cases with Congo-red by Rossak, Deinhardt, and others. Our own experience in the use of this substance has been limited to cases of bleeding associated with salpingo-oophoritis, where the results have been satisfactory. Peck and Goldberger have reported good results in ten of twelve cases treated by the subcutaneous injection of moccasin venom.

Although functional menorrhagia is admittedly an endocrine disturbance, results with endocrine preparations which theoretically should be effective have been somewhat disappointing.

Thyroid extract remains the most valuable of these, and since it is simple to use, inexpensive and frequently effective, should be given a trial in all cases showing a slightly lowered or even normal basal metabolism. It is successful in a considerable proportion of adolescent menorrhagias, and may be useful even in preclimacteric bleeding.

Theoretically, since a high proportion of these cases show hyperestrinism and an absence of the corpus luteum, the newer potent corpus luteum

extracts should be effective; but, clinically, our results with them have been disappointing, whether or not because of insufficient dosage of this very expensive preparation, we cannot say.

Urinary prolan preparations have not given, in our hands, the brilliant results reported by Novak and others, but may be effective and are worth trying. Two hundred rat units are given daily until the bleeding ceases, or until ten injections have been given. Some authorities continue with a one hundred rat unit dose at three-day intervals in the intermenstrual period, while others await the next period and repeat the treatment as frequently as necessary.

The indications for curettage have already been discussed. Destruction of the endometrium by other methods, such as steam vaporization or chemical caustics, are mentioned only to be condemned, since they may be attended by disastrous sequelae or even death.

More radical operative treatment, such as hysterectomy, should almost never be done, although in certain rare cases in relatively young women who have exhausted all the other therapeutic possibilities it may be considered less radical than the production of the premature menopause by radiation. The possibilities that long-continued hyperestrinism may be due to a granulosa cell tumor so small that it has been overlooked should always be borne in mind. In such a case, brilliant results will follow its removal.

The results of a follow-up study of cases of menorrhagia treated with radium have led to a sharp limitation in its use, and we now practically never employ it in young women or in any case where the production of an artificial menopause would be undesirable. The menorrhagia can practically always be controlled, but sometimes with sequelae far more distressing to the patient than was her bleeding. The feeling that normal periods can be restored by small dosages was shown to be fallacious, since this result was obtained in only 35 per cent of women under thirty-five and 7 per cent over this age. Although in general the results were fairly uniform, the individual variation in response was so great that it was quite impossible to predict the outcome. Small doses used cautiously often necessitated further treatment, yet bleeding sometimes continued after large repeated doses, while permanent amenorrhea was in some cases produced by less than 500 mch. Dyspareunia, due to vaginal atrophic changes, frigidity and sterility, were a frequent source of complaint; the latter, of course, probably often primary, but attributed by the patient to the treatment. Severe menopausal symptoms were not frequent in our series, and did not seem proportional to the dosage as maintained by Keene and Paine. However, even women near the menopausal age were sometimes intensely dissatisfied by the sudden cessation of their functional activity when they had not understood that this might happen. Since curettage to eliminate malignancy is so urgently indicated in all this group and a menopausal dose of radium is curative, it seems logical to administer it at once and most patients are entirely satisfied to have this done. In

fact, our most grateful patients were in this group, many stating that they had never felt so well. However, once malignancy has been eliminated, there is no great risk in conservative treatment; and although radiation will eventually be required in most of this older group, the patient will be far more satisfied if she reaches this conclusion herself. A careful explanation of the whole situation, with the patient making her own choice, is desirable. Roentgen irradiation gives results very similar to radium, but since a curettage is urgently indicated in any case before radiation it is simpler to complete the treatment with one dose of radium intra-uterine, unless there are contra-indications to radium, as with previous pelvic peritonitis or postoperative adhesions, when there might result serious damage to an adherent loop of intestine.

The treatment, therefore, in the young individual should exhaust all possible palliative methods, of which there are many, before resorting to radical operative or radiation therapy; while, in the pre-menopausal group, radiation gives almost ideal results, provided the patient understands clearly what these results will be.

New York's New Nurse Practice Law.—New York's legislative tussle ended April 6, 1938, when Governor Lehman signed its new Nurse Practice Act. It has been watched with keen interest by nurses all over the country, not only because many are considering a revision of the laws in their own states, but because thousands of persons are affected by the provisions of the Act.

The Nursing Information Bureau has received numerous inquiries about the new law. All are referred either to Miss Stella Hawkins, Secretary of the New York State Board of Nurse Examiners, State Education Building, Albany, or to Miss Emily J. Hicks, Executive Secretary of the New York State Nurses' Association, 152 Washington Avenue, Albany, New York. Both have all details about the bill and its interpretation at their finger's tips.

An informal statement about the major provisions of the Act follows:

The Act defines nursing practice. It becomes law July 1, 1938. However, nurses now practicing but not licensed, are granted two years' time in which to become licensed. In other words, after July 1, 1940, all who wish to practice nursing for hire in New York State, must be duly licensed. If they are not, they will be subject to substantial fines or imprisonment.

Two classes of licenses will be issued: one to practice as a registered professional nurse; one to practice as a practical nurse.

The letters R. N. may be used by registered professional nurses only. No letters, figures or words other than "practical nurse" may be used to designate a licensed practical nurse.

Citizenship is a requirement for registration. However, if a nurse is not a citizen but has declared her intention to become one, a license may be issued, but will be void at the end of seven years if the holder has not become a citizen of the United States.

Who are eligible for R. N. licenses: In general, all nurses who wish to be registered professional nurses must meet specified requirements of age, preliminary education, citizenship and character, and the course in nursing which they had must be considered satisfactory by the New York State Department of Education. In addition:

1. All nurses who are New York State registered nurses on July 1, 1938, will be considered registered professional nurses when the Act becomes effective on that date.

2. Nurses who are graduates of schools of nursing which have been registered by the New York State Department of Education, will be eligible for licensing as registered professional nurses.

3. For the two-year period—July 1, 1938, to July 1, 1940—nurses whose preparation and experience are considered satisfactory by the New York State Department of Education, may be licensed under a special waiver. Space does not permit a complete statement about its provisions in this bulletin. One of them, however, affects so many nurses throughout the country that it is included:

Graduates of schools of nursing, accredited in any other state, province or country, who meet all except the residence requirements, may take New York State Board examinations. If they pass them, they will be licensed as registered professional nurses.

Inquiries about the other provisions should be sent to the New York State Board of Nurse Examiners.

Who are eligible for the practical nurse licenses: In general those who wish to be licensed practical nurses, must meet specified requirements of age, character, citizenship and preliminary education (completion of the eighth grade or its equivalent); they must be graduates of registered schools for practical nurses, which give at least a nine months' course in practical nursing; and they must pass examinations.

A special waiver, effective from July 1, 1938, to July 1, 1940, provides for the licensing of trained attendants and of those who have rendered satisfactory service over a given period of time.

Mesenteric Vascular Occlusion.—The study Lorin D. Whittaker, Peoria, Illinois, and John de J. Pemberton, Rochester, Minnesota (*Journal of the American Medical Association*, July 2, 1938), present is based on a consecutive series of sixty proved cases of mesenteric vascular occlusion seen at the Mayo Clinic, in fifty-seven of which necropsy was performed; in the remaining three cases surgical procedures performed for the occlusion were survived. There were thirty-six cases (60 per cent) in which mesenteric vascular occlusion was unrelated to any previous surgical procedure and, of this group, only sixteen patients (two of whom survived) were subjected to abdominal exploration; the condition of the remaining twenty patients did not warrant surgical intervention. There were twenty-four cases (40 per cent) in which mesenteric vascular occlusion followed some operative procedure (splenectomy, appendectomy, herniorrhaphy and the like) and, of this group, only three patients were subjected to reexploration. Reexploration was not made either because of the patient's immediately poor condition or because it was felt that operation offered no hope for recovery. Of the three cases in which reexploration was carried out, in one the reexploration followed an operation on the biliary tract; a volvulus was released on the fifth postoperative day and recovery followed. Thrombosis of the vessels which supplied two feet (70 centimeters) of ileum had occurred. In the second case, reexploration followed splenectomy for splenic anemia. Enterostomy was performed on the twenty-seventh postoperative day; the jejunum was found discolored. Venous thrombosis continued to the extent of completely blocking the superior mesenteric and portal veins; death occurred on the twenty-ninth postoperative day. In the third case reexploration followed hysterectomy. On the eighth postoperative day an internal hernia through the transverse mesocolon was reduced; the lower part of the ileum was discolored, and thrombosis of the superior mesenteric artery and vein progressed to the extent of complete involvement. Death occurred on the tenth postoperative day. The mortality rate in the entire group was 95 per cent; the mortality rate of patients operated on for occlusion was 84.2 per cent. The incidence of involvement of the superior mesenteric artery as compared with that of the superior mesenteric vein compares closely with the relative incidence reported by other authors. Involvement of the inferior artery in one case and of the inferior vein in two cases presents a rather high incidence of such involvement. The source of mesenteric vascular occlusion varies as to whether the artery or the vein is involved. Occlusion of the superior mesenteric vein occurs secondary to ascending thrombosis usually attributable to infectious processes, secondary to descending thrombosis from the associated portal vein or secondary to hepatic disease, or it follows an abdominal surgical operation. Hepatic cirrhosis was noted in some cases of splenic anemia and may have been contributory to thrombosis in these cases following splenectomy.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

CALIFORNIA MEDICAL ASSOCIATION

WILLIAM W. ROBLEE	President
CHARLES A. DUKES	President-Elect
LOWELL S. GOIN	Speaker
KARL L. SCHAUPT	Council Chairman
GEORGE H. KRESS	Secretary-Treasurer

THIS MONTH'S TOPICS

ASSOCIATION ACTIVITIES

1. *Council Minutes: 265th and 266th Meetings.*
2. *Announcement of Annual Session Awards for Scientific Exhibits.*
3. *A Proposed Chiropractic Initiative.*
4. *Our Obligations Prior to the California Primary Elections of August 30.*

DEPARTMENT OF PUBLIC RELATIONS

1. *Joint Meeting of Solano, Sonoma, Napa and Marin County Medical Societies.*
2. *California Problem of Migratory Agricultural Workers (Migrants).*
3. *Have County Hospitals Legal Right to Make Hospitalization Charges to Indigent Patients? A Negative Opinion.*

COUNCIL MINUTES*

Minutes of the Two Hundred and Sixty-fifth and Sixty-sixth Meetings of the Council of the California Medical Association

Minutes of Council meetings are printed after their approval by the Council. The minutes of the two hundred and sixty-fifth meeting (organization meeting) and of the two hundred and sixty-sixth meeting (special meeting) will be considered by the Council at its September meeting and will be printed in the October issue of the Official Journal.

CALIFORNIA MEDICAL ASSOCIATION AWARDS FOR SCIENTIFIC EXHIBITS AT THE PASADENA ANNUAL SESSION, MAY 9-12, 1938

The Council's Committee on Scientific Exhibits (Doctors Lemuel P. Adams of Oakland, Mast Wolfson of Monterey, and E. B. Dewey of Los Angeles) made the following awards for scientific exhibits presented at the Pasadena annual session of the California Medical Association.

First prize, \$100, to Dr. G. Mosser Taylor of Los Angeles for his exhibit, "Manipulative Surgery."

Second prize, \$60, to Dr. Roger W. Barnes of Los Angeles for his exhibit, "Models of the Prostate."

Third prize, \$40, to C. M. Hyland of Los Angeles for his exhibit, "Convalescent Serum."

PROPOSED CHIROPRACTIC INITIATIVE

At the time of this writing, word has come to us from unofficial sources that a proposed initiative to amend the existing Chiropractic Practice Act of California—which was

* The minutes of the two hundred and sixty-first, two hundred and sixty-second, two hundred and sixty-third, and two hundred and sixty-fourth meetings of the Council of the California Medical Association were printed in the July, 1938, issue of CALIFORNIA AND WESTERN MEDICINE, page 82.

adopted by vote of the electorate some years ago—would not be on the November 8 general election ballot, because of insufficiency in the number of legal signatures required. The lacking signatures are of sufficient number to indicate that at this late day, in the rush of other initiative petition distribution, the needed signatures may be rather difficult to secure.

One of the announced purposes of the proposed initiative was the elevation of the number of undergraduate student hours to the 4,000-hour level. With the legalization of a curriculum on such a basis, it would probably have only been a matter of time until other amendments to provide for special "physicians and surgeons" certificates for chiropractors" would be brought forward.

For the present, such an effort, if it was under contemplation, must bide for a later time. For which, both the public and the profession should be grateful.

OUR OBLIGATIONS PRIOR TO THE CALIFORNIA PRIMARY ELECTIONS

California's primary election will take place on Tuesday, August 30, a date about two weeks distant from the time on which the August issue of the Official Journal will be in the mails.

The final or general election will be held on November 8, 1938 (second Tuesday in November).

The fifty-third session of the California Legislature (Assembly and Senate) will convene at Sacramento in the first week of January, 1939.

The above dates are full of significance for the medical profession of California.

It is true that what will take place in next year's 1939 Legislature, as regards medical practice and public health standards for California, will depend in part upon the trend of elections on November 8, 1938, but even more on who may be selected as the official nominees of the Democratic, Republican and Progressive parties on Tuesday, August 30, 1938.

However, the importance of the Primary Election of Tuesday, August 30, is the thought these comments would particularly emphasize.

If, on that day, citizens could be nominated who are not antagonistic to the medical profession and the principles which its members hold in the matter of public health and medical practice statutes, and who will be happy to listen to the advice of physicians, then worry concerning the ballot count in the November election or the 1939 biennial session of the California Legislature would be greatly lessened.

Even though the present plea comes to the component county medical societies and the members of the California Medical Association only two weeks or so in advance of the primary election of August 30, much effective work for eligible and desirable candidates may still be done!

Now, what are some of the things to keep in mind concerning the work referred to, and in which every member of the California Medical Association should be interested? Should not items such as follow be remembered?

1. Who are the foremost candidates of the respective parties for offices of the assemblyman or senator in your own district?

2. Do you know aught of their background: in business, social or civic affairs?

3. Do you know any of them personally, or have you a friend or friends who know any of them with any degree of intimacy?

4. Do you know whether they have family physicians; and if so, the names of the family physicians?

5. In your opinion, do they properly qualify for public office, as lawmakers?

6. Are you acquainted with their attitude on public health and medical practice matters?

7. Are they persons who have a kindly reaction to the medical profession and who would listen to, and give friendly consideration to the advice of physicians?

8. Do you intend to become personally acquainted with any of the candidates?

9. If you do contact the candidates whom you think you would prefer to support, is it your intention to let them know you are interested in their candidacies, and that you will be glad to keep them in touch with public health and medical matters, without either making or requesting promises?

10. If you know the family physicians of candidates, will you pass on to such colleagues the importance of the relation they bear, and the great aid they could be?

11. After learning about candidates, in case information of interest is passed on to you, do you intend to transmit the same promptly to your local Committee on Legislation and Public Policy, and to the State Association Committee, either directly or through the central office of the California Medical Association, Room 2004, 450 Sutter Street, San Francisco?

12. Is it part of your intention to ask fellow physicians, friends and patients to vote and work for the election of candidates who, as assemblymen or senators, could be safely relied upon for sound judgment and action on public health and medical practice matters?

• • •

The above may seem an appalling list of responsibilities in a matter not intimately connected with your personal practice; but if neglected, it is possible that you and your fellows may be called upon to give a vastly greater amount of time and effort to safeguard that very personal practice. We live in a rapidly changing world. All kinds of propaganda are in the air, and citizens without number have been so misled in their thinking that where in past years they could have been counted on for co-operative endeavor, today they are hesitant, distrustful, or even antagonistic.

• • •

To repeat: The date of the California primary election is Tuesday, August 30.

Do your personal part, along lines indicated in the twelve points outlined above.

Pass on the information you secure to your local officers or committee, or to the State Association secretary, or to the State Association chairman of the Committee on Legislation and Public Policy. (The addresses of the State Association officers are printed in every issue of *CALIFORNIA AND WESTERN MEDICINE*, on advertising page 2.)

When you help in this, you help yourself, your colleagues, the medical profession and the public.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

Joint Meeting of Solano, Sonoma, Napa and Marin County Medical Societies

Solano County Medical Society was the host unit for the Saturday, July 16, dinner meeting, with Sonoma, Marin and Napa county medical societies as the guest units, held at the Vallejo Yacht Club in Vallejo. About one hundred members from the four societies turned out, the occasion being honored by the presence of President W. W. Roblee of Riverside, President-Elect Charles A. Dukes of Oakland,

† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. George G. Reinle of Oakland is the chairman and Dr. George H. Kress is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. George H. Kress, Room 2004, Four Fifty Sutter Street, San Francisco.

and three past presidents, Doctors George G. Reinle, Robert A. Peers and George H. Kress.

Dr. Ream S. Leachman, president of the Solano County Society, opened the conjoint meeting, turning over to Secretary John W. Green the honor of introducing the guests from Mare Island Navy Yard, county and city officials from Solano County, and visiting physicians from San Francisco and other counties. An orchestra, entirely composed of physicians and dentists, under the able leadership of Lloyd E. Kendall of Oakland, entertained with popular and classical music. A vocal and dancing floor show added to the other enjoyable features. President-Elect Charles A. Dukes gave the major talk of the evening, but President Roblee, Councilor Henry S. Rogers of the Ninth District, and Association Secretary Kress also made informal speeches on organization needs and topics. Dr. James W. Morgan acted as master of ceremonies for the entertainment program. Dr. Jefferson Larkey conducted a symphony, all his own. The evening was voted a big success by all who were in attendance.

The photographs printed on page 156 in this issue of the Official Journal are ample evidence of the good time and fellowship.

* * *

Migratory Agricultural Workers in California: Their Influx an Increasingly Grave Problem for the State*

When more than 220,000 persons—men, women and children—enter a commonwealth within the short period of two and one-half years, to pursue a type of migratory existence, there immediately arises a problem neither unimportant nor negligible.

When, in addition, the great majority of these itinerants are both impoverished and undernourished, living from hand to mouth and moving from place to place in an effort to find work in one form or another in agriculture, for which, by previous experience, they may or may not be fitted, a solution of the problem becomes more difficult.

And then, when certain other factors come into play the economic, social welfare, medical and political responsibilities involved in the advent of these newcomers must at once become apparent. These factors are:

1. Lack of required legal residence that would entitle them, even though indigent, to treatment in county hospitals;

2. Indifference on the part of many of these persons to make an effort for themselves, or to find shelter with proper sanitary conveniences; and an

3. Incapacity, observable again and again, on the part of the women folk in particular, to prepare for routine meals those vegetables and fruits with which California abounds, and which the undernourished bodies of such wandering individuals are so often and so sorely in need.

Even though it be true that California is a great state, with inherent natural resources, and a citizenry able to meet almost any and all kinds of complications, it still must be evident that under conditions like those noted above our commonwealth may be faced with problems demanding for their solution extensive reserve resources of a material nature, as well as a broad and clear outlook from both state and local officials. For upon them rests the responsibility of guiding aright, into useful California citizenship, these émigrés—largely of North American stock who have come here, mostly from Missouri, Kansas, Arkansas, Oklahoma, Texas and Arizona—to take up residence and find for themselves and their families an honest livelihood.

That the situation is more than an interstate matter is evidenced by the cooperation already given by the Federal Government in an effort to solve the vexed problems. This was indicated in a report by Dr. Karl L. Schaupp, San Francisco, recently made to the Council of the California Medical Association, and printed on page 460 in the June issue of the Official Journal.

In the co-operative plan that has been developed during the last several years, federal agencies such as the Resettlement Administration of the U. S. Department of Agriculture (now the Farm Security Administration) and the U. S.

* EDITOR'S NOTE.—After this article concerning migratory workers was sent to the printer, an item on a political phase of the problem appeared in the San Francisco *Chronicle* of July 26. It is reprinted in this issue, on page 170.

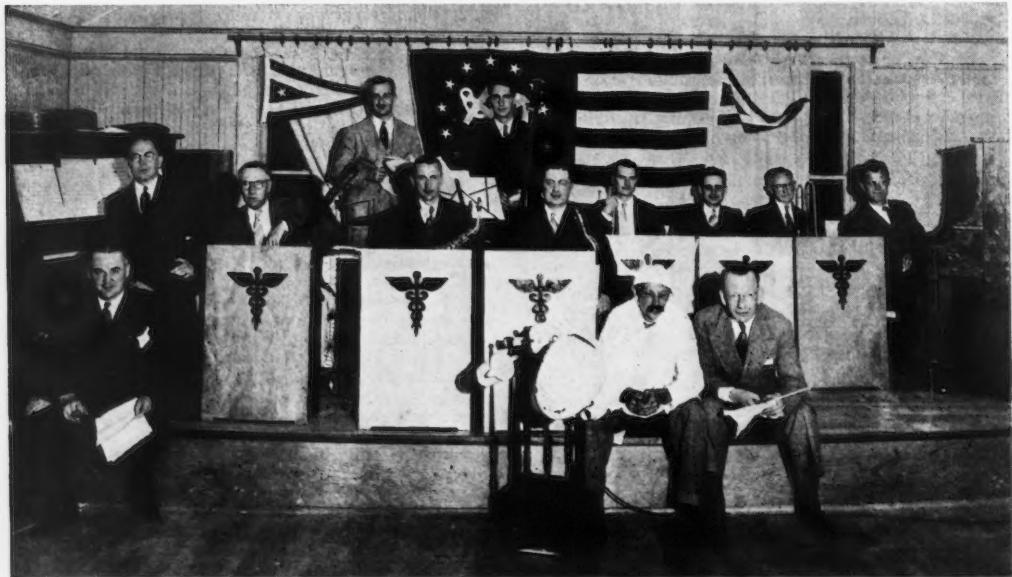


Dinner of Solano (hosts), Sonoma, Marin and Napa County Medical Societies, at Vallejo Yacht Club, July 16, 1938. Guests at table, left to right: Norman Leet; Hartley F. Pearl, legal counsel; Jefferson Larkey; Robert A. Peers, M.D., ex-president; Charles A. Dukes, M.D., president-elect; William W. Roblee, M.D., president; George H. Kress, M.D., Association secretary; Henry S. Rogers, councilor, Ninth District; Admiral David W. Bagley, commandant, Mare Island Navy Yard; Mayor Fred Heegler of Vallejo; Captain E. E. Curtis (M.C.), U.S. N., executive officer, Naval Hospital, Mare Island; Thomas O'Hara, president, Vallejo Chamber of Commerce; and Captain Grier Duncan, U.S. Navy.

Public Health Service, working with the California State Board of Public Health Service and the State Relief Administration, have united to form a nonprofit corporation known as the "Agricultural Workers' Health and Medical Association," the Federal Government allocating for its use the sum of \$100,000. One of the seven members of the board of directors of this corporation, representing thereon the California Medical Association, is Dr. Karl L. Schaupp, the other physicians on the board being Doctors Albert E. Larsen, Medical Director of the State Relief Administra-

tion, and William R. P. Clark of the California State Board of Public Health.

This conjoint federal-state-civic organization—if it may be so styled—is the first body of its kind to be formed in the United States. California was selected, no doubt, because of the bigness and urgency of the problem of special migratory agricultural workers, as here briefly discussed. The implications involved in the situation, as it exists, and the plans made to combat the complications therewith associated, make the solution of more than passing interest. To for-



Dr. Lloyd Kindall's Orchestra of Doctors and Dentists.—Seated, left to right (front row): James W. Morgan, Jefferson Larkey, Lloyd Kindall; (upper row), Charles Greenwood, Edward Greer, Robert Taylor, Forrest Horner, Fred Hitchcock, Fred Fisher, William Stratton, Norman Leet; (standing), Lee Garron, Ted Redewill. (Photograph taken at the dinner of Solano (hosts), Sonoma, Marin and Napa County Medical Societies, at Vallejo Yacht Club, July 16, 1938.)

ward such a possible solving, the California Medical Association Council called into conference at San Francisco, on February 2, the secretaries or other representatives of twenty county medical societies from sections of the state where this problem was attracting more than ordinary attention. The attention of all members of the Association is now directed anew to the subject because future phases may be even more grave than those of the present.

The State Association headquarters requests component county societies to send to 450 Sutter Street, San Francisco, press or other reports, as work in connection with these migratory farm laborers goes forward.[†]

* * *

Have County Hospitals Legal Right to Make Hospitalization Charges to Indigent Patients?

A Negative Opinion*

Dear Doctor:

I have read with interest the opinion of Deputy County Counsel L. K. Vobayda [of Los Angeles County] dated May 23, 1938, and addressed to the Board of Supervisors of the County of Los Angeles, a copy of which you forwarded to me. In accordance with your request, I will submit herein my reaction to the County Counsel's opinion.

* * *

In the first place, it is an exhaustive review of the California statutes relating to county relief and is an illuminating explanation of the collection methods followed in Los Angeles County and the reasons therefor. There is only one assertion contained in the opinion with which I disagree, but inasmuch as the particular statements concerned go to the heart of the opinion, I believe that I had better explain in detail my reasons for holding a contrary view.

The opinion of Deputy County Counsel Vobayda assumes throughout that Division IV of the California Welfare and Institutions Code, which is entitled: "Indigent Persons," and which contains those statutory provisions formerly found in the "Pauper Act of 1933," constitutes a specific grant of authority to all counties to collect after acquired property from persons receiving medical services and hospital care in county hospitals and that it is within the power of boards of supervisors to determine whether to operate county hospitals under said Division IV of the Welfare and Institutions Code or under Division I, Chapter III, of the same code, which is entitled: "Local Administration" and which contains specific sections relating to the government, management and control of county hospitals. For example, the following statements are found in the opinion:

"This is true because reimbursement for aid given in the general hospital of this county is governed by the Public Welfare Act, due to action of your board embodied in Sec. 4 of the Rules Ordinance making the Public Welfare Act applicable thereto."

and

"It seems clear, beyond controversy, that the County of Los Angeles in administering hospital care is administering same under the provisions of the Public Welfare Act, which provides a liability upon an indigent for reimbursement if he acquires property after the aid is rendered to him and which consequently makes it the duty of the county to collect."

I am forced to disagree with these statements and with the assumption that the furnishing of medical services and hospital care to people who are actually ill or injured is governed by those sections of the Welfare and Institutions Code which relate to county aid and relief to indigents. In addition, I am forced to disagree with the statement that the board of supervisors of Los Angeles County or of any other county can determine by ordinance what general laws of the state they undertake to follow and what general laws they intend to deem inapplicable. Such determination is a matter for the legislature in the first instance and the courts thereafter, if legislative intent is not fully apparent.

As pointed out in the opinion of Deputy County Counsel

[†] See also "Migrant Vote" item on page 170.

* This opinion by Hartley Peart, Esq., general counsel of the California Medical Association, is a portion of a letter from Mr. Peart to Dr. George H. Kress, in reply to a request therefor. The subject discussed has an intimate relationship to county hospital administration throughout the State of California, with special reference to rulings concerning the Los Angeles County Hospital. For other comment, see page 108.

For comment by a legal friend, on Mr. Peart's opinion, as here printed, see page 166.

Vobayda, Sections 200-203, inclusive, of the Welfare and Institutions Code (which were formerly Sections 4041.16 and 4223 of the Political Code) provide specifically for the erection and maintenance of county hospitals and the care and maintenance therein of indigent sick and dependent poor persons. These sections are permissive in nature, that is to say, county boards of supervisors may, if they so desire, erect and maintain county hospitals and may prescribe rules for the government and management thereof. But if a board of supervisors does maintain a county hospital, it must provide medical care and hospital facilities therein only to those persons in the county who are indigent sick or dependent poor. This point was decided in

Goodall vs. Brite
11 Cal. App. (2d) 540,

and a definition of the phrase "indigent sick or dependent poor," as used in Section 200, is contained in the opinion.

Sections 2500, 2600-2604, inclusive, of the Welfare and Institutions Code (these sections were formerly contained in the Pauper Act—Deering's General Laws, 1933, Act 5815) provide in substance that every county *must* support all residents therein who, by reason of poverty, incompetency, age, disease or accident are unable, through their own resources or through relatives or friends to provide necessary food, clothing and shelter. These sections also provide that where a county does grant aid and relief to its poor persons, it is entitled to take from such persons such property as they may have and such property as they may thereafter acquire—at least to the extent necessary to reimburse the county.

It is my opinion that the furnishing of medical care and hospital facilities to those indigent persons who are sick and injured in the county hospital is exclusively governed by Sections 200-203 of the Welfare and Institutions Code and that Sections 2500, 2600-2604 concern only the *support* of the poor by the county. An examination of Section 2500 shows that it is intended to govern incompetent persons and poor persons who are unable to provide themselves with food, clothing and shelter, and those incapacitated by reason of age, disease or accident to provide themselves with the means of livelihood. The section is quite clearly a relief measure and is not intended to affect in any manner the furnishing of medical care and hospital facilities. Section 2500 is quoted by Deputy County Counsel Vobayda, but in order to amplify my point, I shall quote it herein:

"Every county and every city and county *shall* relieve and *support* all incompetent, poor, indigent persons and those incapacitated by age, disease, or accident, lawfully resident therein, when such persons are not supported and relieved by their relatives and friends, or by their own means, or by state hospitals or other state or private institutions."

The reference to "state hospitals" is clearly intended merely to exclude from the mandatory duties of counties the support of incompetents and others committed to state institutions.

Section 2600 of the Welfare and Institutions Code, a part of the former Pauper Act, contains the phrase "while receiving public assistance" and the phrase "an applicant for public relief." Section 2603 provides as follows:

"If a person for the *support* of whom public moneys have been expended acquires property, the county shall have a claim against him to the amount of a reasonable charge for moneys so expended and such claim shall be enforced by action against him . . . The *support* of such indigent from public funds shall be deemed a ground for sale or encumbrance of his property . . ."

It is to be noted that Section 2500, Section 2600 and Section 2603 refer to "public assistance," "relief" and "support," all of which are phrases normally used in the dispensation of food, clothing and shelter to those unable to provide themselves with the same. These sections do not use phraseology consistent with an intent to govern the furnishing of medical care and hospital facilities.

In

County of Los Angeles vs. Payne
8 Cal. (2d) 563

the Pauper Act of 1933, now Sections 2500-2604 of the Welfare and Institutions Code, was under discussion. The case arose as a consequence of an appropriation of \$1,000,000 by the Los Angeles County Board of Supervisors to provide for the direct relief of indigent persons. The Court held that

the aid and relief of indigent residents of a county is a mandatory duty imposed upon counties by the statute in question, and that its purpose is to require counties to furnish food, shelter and necessary supplies to those persons who would otherwise be faced with want and starvation.

In

San Francisco vs. Collins

216 Cal. 187

the Pauper Act was likewise construed and it was there held that it required counties to furnish aid and relief to permanent paupers and to "every person coming within the terms of the statute dependent upon public assistance for the necessities of life."

Hence, it is clear that both the language of Sections 2500-2604 of the Welfare and Institutions Code and the judicial decisions construing them require the conclusion that they deal only with the furnishing of food, shelter and clothing to destitute people. Of course, it is no more than just that people in need of relief be required to reimburse the county if they subsequently become able so to do. For that reason the legislature has provided in Sections 2601-2604 for such reimbursement wherever possible.

As a matter of statutory construction, it must be noted that in the interpretation of statutes containing specific enumerations of things or conditions courts apply the maxim "expressio unius est exclusio alterius."

County of Modoc vs. Spencer

103 Cal. 498; 25 R. C. L., Sec. 229.

Hence, the enumeration of "public assistance," "public relief" and "support" exclude other matters, such as "medical care" and "hospitalization." The fact that medical care and hospitalization are fully covered elsewhere renders the application of the maxim even more certain.

There is one additional reason which impels me to disagree with Deputy County Counsel Vobayda's assertion that the Pauper Act includes medical care and hospital facilities; that is, the fact that determination of indigency under Sections 200-203 of the Welfare and Institutions Code (the sections specifically dealing with county hospitals) and under Section 2500 of the same code, may and often does require two entirely different standards. One is not entitled to county aid and relief under Sections 2500-2604 unless one is so poor, whatever the reason, that one cannot otherwise secure the very bare necessities of life, viz., food, clothing and shelter. On the other hand, one may be entitled to medical care and hospital facilities in the county hospital even though one is able to provide oneself with food, clothing and shelter. For example, let us assume that Mr. X is married, has three minor children, rents a home, earns \$100 a month and has meager savings. Under the decision in

Goodall vs. Brite

11 Cal. App. (2d) 540,

if Mrs. X is severely injured, requiring a great deal of medical attention and several weeks' hospitalization, she may be an "indigent sick or dependent poor" person and so entitled to medical services and hospital care at county expense. At the same time, Mr. X cannot be said to be within the Pauper Act.

To sum up, it is my opinion that Sections 2600-2604 of the Welfare and Institutions Code, which authorize counties to secure from applicants for public assistance and support a transfer of such property as the applicants possess, together with a transfer of property that may be acquired in the future, only apply to persons receiving direct aid and relief under Section 2500 of the Welfare and Institutions Code. Further, it is also my opinion that persons who may be entitled to medical care and hospitalization at county expense under Sections 200-203 of the Welfare and Institutions Code may not be required to transfer to the county such property as they may possess (unless they are only partial indigents under the decision in *Goodall vs. Brite*, *supra*) and may not be required to transfer property acquired in the future unless, in addition to receiving medical care and hospitalization, they receive direct public support in the nature of food, clothing and shelter.

Very truly yours,

HARTLEY F. PEART.

June 20, 1938.
111 Sutter Street, San Francisco.

COMPONENT COUNTY MEDICAL SOCIETIES
KERN COUNTY

The Kern County Medical Society met at the Mercy Hospital on Thursday evening, May 19, with Dr. Harry Lange presiding. The minutes of the April meeting were approved as read. The secretary read the minutes of the Advisory Committee for furnishing care to migratory workers, headed by Dr. Karl Schaupp as Chairman. The cooperation of the members was requested in supplying the necessary data for the American Medical Association survey on the need for medical care. The secretary then gave a brief report on the Pasadena meeting of the California Medical Association. Dr. L. A. Packard, Councilor for the Third District, reported also on the meeting and on the action of the Council in electing Dr. George H. Kress to the combined offices of secretary-treasurer and editor for the California Medical Association.

Mr. Ben Read, Secretary of the California Public Health League, presented a report of the activities of that organization during the last meeting of the Legislature. Dr. Philip H. Pierson, Chief of the Stanford Tuberculosis Service at the San Francisco Hospital and President of the California Tuberculosis Association, spoke on *Problems in the Diagnosis and Treatment of Pulmonary Tuberculosis*. He mentioned the recent efforts in California to eradicate bovine tuberculosis which have been most successful. The rôle of the general practitioner in the early diagnosis of tuberculosis was stressed. Numerous chest roentgenograms were shown by Doctor Pierson to demonstrate various types of lesions.

The meeting was then adjourned and refreshments were served.

C. S. COMPTON, *Secretary*.

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MENDOCINO-LAKE COUNTY

For those who were unable to attend the Fort Bragg meeting June 25, 1938, the following is a summary of the evening's events:

The meeting was called to order at 8:30 p. m. Doctors Wolfe, Bowman, Lloyd, Wagner, Scudder, Barcklow, Cushman, Kirwin, Toller, Hill, Beil, Huntley, Huntley, Jr., and Smalley were present. Preceding was a "shore" dinner prepared under the direction of the Fort Bragg members. In the absence of President Craig, Dr. Royal Scudder presided.

Report on the Study of Medical Care showed that only about half the reports were in. The members of the committee, Doctors Kirwin, Craig, Smalley and Bowman were urged to contact the doctors in their districts and to help them get in their reports.

The correspondence from the California Society for the Promotion of Medical Research was discussed, especially by Doctor Cushman who explained that the Humane Pound Act was really a disguised antivissectional bill and was aimed directly at the medical science. The action of the last meeting to have the members send in their contributions individually rather than for the Society to make a contribution was allowed to stand. Send your contribution to California Society for the Promotion of Medical Research, 369 Pine Street, Suite 325, San Francisco. . . .*

The County Charter was presented for consideration.

The following new members were voted upon and passed: Dr. George Loye, Dr. Joseph H. Smyth, Dr. J. E. Mooy, and Dr. George Barcklow.

Mr. Don Devin, a representative from the Lloyd Kahn and Company, Insurance Brokers, gave a long and interesting talk on the topic of medical insurance in general and the Lloyd's policy as written by them. Following this report there was considerable discussion by Doctor Cushman, Doctor Beil, and others.

The date of the next meeting was set for August 9, 1938, to be held somewhere in Lake County.

A motion was made, seconded, and unanimously passed to thank the Fort Bragg members for their entertainment. . . .*

ROBERT B. SMALLEY, *Secretary*.

* Items here omitted have been placed on the docket of the Council for consideration and, pending decision by that body, will not be printed.

PLACER COUNTY

The Placer County Medical Society held its June meeting in the Children's Building at the Weimar Sanatorium Saturday evening, June 11, 1938. In the absence of President Lewis, Doctor Thoren, chief of staff of the Weimar Sanatorium, presided. There were present the following members and visitors:

Members: Doctors Thoren, Peeke, Padgett, March, Smith, Hirsch, Peers, P. D. Barnes, Atkinson, Lundgaard, Empey, Louis E. Jones, Eveleth, Flatley, and Vinks.

Visitors: Doctors Robert P. Weddle, J. A. Trolan, L. F. Seapey, and V. E. Gerke; and Mrs. Eveleth.

Following the reading of communications, the application for membership of S. F. Tobias, M.D., of Grass Valley, was read and he was unanimously elected to membership.

The application of Robert P. Weddle, M.D., of Roseville, was also read and Doctor Weddle was unanimously elected.

The applications of E. A. Casey, M.D., of Grass Valley, and of S. S. Kalman, M.D., of Roseville, were read for the first time.

The Secretary reported the death of Dr. W. A. Lavery, of Loyalton, for many years a member of the Placer County Medical Society.

Dr. L. W. Empey, of Roseville, delegate to the Pasadena meeting, reported on the proceedings of the House of Delegates and also on the Scientific Program and the Scientific Exhibit. On motion by Doctor Empey, seconded by Dr. Louis E. Jones, a Committee of Three on Malpractice Insurance was authorized.

The program of the evening was a *Symposium on Compression Therapy in the Treatment of Tuberculosis*, presented by the staff of the Weimar Joint Sanatorium.

Dr. J. A. Trolan presented a paper outlining the history and clarifying the terminology of surgical collapse therapy in pulmonary tuberculosis. His paper described the development of pneumothorax, closed and open intrapleural pneumolysis, pneumoperitoneum, phrenicectomy, and thoracoplasty. This introductory paper was followed by the demonstration of cases treated by the above therapy at Weimar Joint Sanatorium. An attempt was made to demonstrate not only the very best results but to cover the complications and unfavorable results which the various procedures entail.

Dr. E. S. Peeke presented cases of unilateral and bilateral pneumothorax; also cases showing the results of phrenicectomy alone, pneumoperitoneum alone, and phrenicectomy with pneumoperitoneum combined.

Dr. L. F. Seapey then took up the subject of the complications of pneumothorax, showing first cases of mixed tuberculosis empyema cured by aspiration, irrigation and oleothorax, and a case which did not respond to this conservative treatment nor to the Eloesser flap operation because of complicating bronchial fistula. The complication of adhesions holding a cavity open was next considered and the treatment by closed intrapleural pneumolysis shown. A case of failure with closed intrapleural pneumolysis, due to a non-collapsing blocked cavity, was demonstrated. The treatment of tuberculosis wherein pneumothorax has failed was next considered: the first subject being extrapleural pneumolysis. Two cases were shown: the space being maintained in one by wax and in the other by air. Cases demonstrating one and two stage upper posterior thoracoplasties were shown. The use of the bronchoscope in demonstrating the locale of tuberculosis and the application of bronchoscopy in discovering non-operable types was touched upon.

The technique of pneumothorax and pneumoperitoneum was then demonstrated before the group by Dr. J. A. Trolan.

Dr. Robert A. Peers, of Colfax, summarized the discussion and pointed out the advantage of showing the poor results of collapse therapy as well as those which ended in marked success.

The meeting then adjourned for refreshments.

ROBERT A. PEERS, *Secretary*.

SAN BERNARDINO COUNTY

The regular meeting of the San Bernardino County Medical Society was held at the San Bernardino County Charity Hospital, in San Bernardino, on Friday, June 3, 1938. The meeting was called to order by President Williams, at 8 p. m.

The following applications for membership were approved: Loleta Simpson, M.D.; Winston G. Nethery, M.D.; and Ralph N. Root, M.D.

The program of the evening was then given as follows:

The Management of Early and Prenatal Syphilis, as They Relate to Public Health Control, by Udo Wile, M.D., Professor of Dermatology and Syphilology, University of Michigan Medical School.

Following a round table discussion, Dr. W. W. Roblee, President of California Medical Association, spoke briefly.

The meeting adjourned at 10:30 p. m.

ARTHUR E. VARDEN, *Secretary*.

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SAN MATEO COUNTY

The meeting of the Board of Directors of the San Mateo County Medical Society was held in the library of Mills Memorial Hospital at 8 p. m., on July 5, 1938.

The Secretary reported on a request he had received from Dr. Freda Meyerfeld that the County Medical Society supply her with a letter for the American Consul in Germany concerning her status as a physician in this country, in order to facilitate the entrance into America of her two nephews. This request was granted.

The Secretary read the final report of Doctor Warnshuis, past Secretary of the California Medical Association, and it was unanimously agreed to send Doctor Warnshuis a letter of appreciation of the good work he had done for the State Association and of the fine coöperation and assistance to the San Mateo County Medical Society which he had rendered.

The application of Dr. Norman D. Morrison, Jr., was submitted and the Board unanimously voted in favor of his admission to the Society.

The application of Dr. Maurice R. Oliva was submitted and the Board unanimously voted in favor of his admission to the Society.

The Secretary read a letter which was received from the San Mateo County Tuberculosis and Health Association concerning the Chest Clinic to be at the Community Hospital. The matter was referred to the Public Health Committee.

The Secretary mentioned a report which had been received from Doctor Murphy concerning the committee established by Doctor Gans to study the public health needs of the county. This letter was referred to the Public Relations Committee. . . .*

No further business was transacted and the meeting was adjourned.

J. GARWOOD BRIDGMAN, *Secretary*.

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TULARE COUNTY

The Tulare County Medical Society held a regular meeting on Sunday, June 26, 1938, at Motley's Café, Visalia, California. Dr. E. R. Zumwalt presided.

This meeting was chiefly devoted to unfinished business of the current spring group of meetings. Many communications were read relative to the change in California Medical Association secretaryship. Because of our uninformed position no action was taken in this matter.

Dr. Howard W. Dueker of Lone Pine, Inyo County, was admitted to membership.

Mrs. Jewett, from the office that is furnishing aid to migratory workers through the Farm Security Administration, answered numerous questions of the various members. We were asked to appoint an advisory committee from the Tulare County Medical Society.

* Upon the advice of the legal counsel of the Association, and pending consideration by the Council of the Association, the item here omitted will not be printed.

Dr. Ellis Sox, newly appointed full time Tulare County Health Officer, outlined his proposed program and asked for our coöperation.

Following these short talks the meeting was turned over for general discussion relative to the County Hospital program. By show of hands nineteen of the twenty-seven members present signified their willingness to continue on the visiting staff.

A motion was made, seconded and carried that a committee of two be appointed to meet with the Board of Supervisors to determine the policy at the County Hospital for the coming year. At their discretion this committee is to recommend the appointment of a full time business manager to the Board. Dr. Austin Miller and Dr. I. H. Betts were named to this committee.

The following summation of suggestions were variously offered:

1. That a business manager be secured for the hospital.
2. That a new hospital staff board be appointed.
3. That a full time pharmacist be employed and a hospital formulary be worked out.

The following were present: Doctors Burton, Fillmore, A. Bond, Barber, N. Miller, Lipson, Neal, Weiss, A. Miller, Matthias, Zink, Watke, Falk, Guido, Betts, Zeller, Rosson, Ambrose, Preston, DeBusk, Seiberth, Zumwalt, Sox, Powell, Cronemiller, Ginsburg, P. Miller, Brigham, and Mrs. Jewett.

The meeting adjourned at 11 p. m.

KARL F. WEISS, *Secretary-Treasurer.*

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VENTURA COUNTY

The regular monthly meeting of the Ventura County Medical Society was held at the Saticoy Country Club on Tuesday, June 14, 1938.

There were seventeen members present. Guests included Doctors C. E. Ebert, Harker, Norton, Moore, Gilman, Bishop, and Witten.

Dr. C. E. Ebert, of Los Angeles, addressed the Society on *Pitfalls for the General Practitioner in the Practice of Urology*. This was followed by the business meeting.

Dr. Olive P. Walton, of the Ventura School for Girls, was unanimously elected to membership in the Society.

Announcement of the campaign for additional members by the Medical Society of California was made by the Secretary. Also, a brief report of the Pasadena Convention was given by the delegate. Doctor Smolt moved, and Doctor Mosher seconded, that the delegate withdraw funds to cover expenses in Pasadena. Carried.

After a brief discussion Doctor Shore moved that the Society go on record as favoring the formation of a Woman's Auxiliary in the county if the ladies are in favor of organizing such a unit. Seconded by Dr. D. G. Clark. Carried.

The program chairman was instructed to arrange a joint meeting with the ladies in the fall to discuss this problem.

The following were appointed as a committee to evaluate the facts gained from the recent survey on medical care: Dr. D. G. Clark, Chairman; Doctor Drace, and Doctor Nelson.

Dr. D. G. Clark moved that the July and August meetings be omitted. Seconded by Doctor Homer. Carried.

Meeting adjourned. A. A. MORRISON, *Secretary.*

CHANGES IN MEMBERSHIP

New Members (25)

Fresno County

James Melvin Arthur Charles S. Mitchell
F. Harold Downing Omar U. Need

Mendocino-Lake County

G. T. Barcklow J. Edward Mooy
San Bernardino County

J. Needham Martin Loleta E. Simpson

San Diego County
Alla Margaret Aldrich E. W. Cartwright
William T. Booth

San Francisco County
Paul G. Fuerstner William Jue Poy
Alfred Goldman Lewis F. Seapy
Oscar Herz James W. Shumate
Harvard McNaught Emily Woelz
Gerasim S. Nazarin

San Mateo County
W. C. Lynch

Stanislaus County
Robert Radcliff

Tulare County
Howard W. Dueker

Ventura County
Olive P. Walton

Yolo-Colusa-Glenn County
Virgil E. Hepp

Transferred (3)

Elmer M. Bingham, from Yolo-Colusa-Glenn County to San Luis Obispo County.

G. Kenneth Hargrove, from Monterey County to Alameda County.

Guido F. Norman, from Humboldt County to San Francisco County.

In Memoriam

Crabtree, Winston Churchill. Died at San Diego, July 14, 1938, age 36. Graduate of University of Michigan Medical School, Ann Arbor, 1928. Licensed in California in 1929. Doctor Crabtree was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

+

Hanlon, Edward Russell. Died at Los Angeles, June 24, 1938, age 61. Graduate of Cooper Medical College, San Francisco, 1899. Licensed in California in 1900. Doctor Hanlon was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

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Martin, John Perry. Died at Oakland, July 5, 1938, age 67. Graduate of the Eclectic Medical College, Los Angeles, 1903. Licensed in California in 1918. Doctor Martin was a member of the Alameda County Medical Association, the California Medical Association, and the American Medical Association.

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Merrill, Belle Ellingsen. Died at Coquille, Oregon, July 6, 1938, age 53. Graduate of the University of California Medical School, San Francisco, 1920, and licensed in California the same year. Doctor Merrill was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

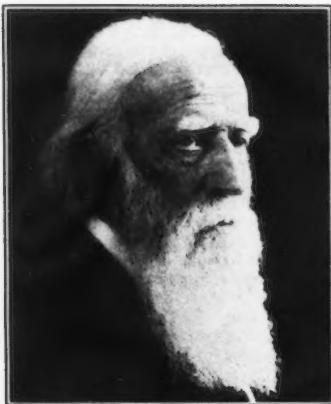
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Swindt, Joseph Martin. Died at Olema, June 9, 1938, age 32. Graduate of Cornell University Medical College, Ithaca, 1932. Licensed in California in 1934. Doctor Swindt was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

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Widney, Joseph Pomeroy. Died at Los Angeles, July 4, 1938, age 97. Graduate of University of California Medical School, 1866. Licensed in California in 1876. Doctor Widney was an Honorary member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

OBITUARY



Joseph Pomeroy Widney*
1841-1938

Dr. Joseph Pomeroy Widney was born in 1841, on December the 26th, in Miami County, Ohio, and he passed from this life July 4, 1938, in his ninety-seventh year.

These two important episodes in the life of every man were interspersed with minor phases of life which were outstanding, so far as their relation to the medical profession of the State of California is concerned.

Doctor Widney received his degree of Doctor of Medicine from the Toland Medical College, now the Medical Department of the University of California, in 1866; he was then 25 years of age. His passing on the national birthday of his country brings so forcibly to mind his military service for his country. He took an active part in two campaigns against the Apaches in 1867 and 1868. The outstanding feature of these campaigns was the long rides on an uncharted desert.

There is no doubt but that some of the books that Doctor Widney wrote in the later years of his life regarding the progress of civilization found a deep-rooted basis in his study of these primitive people on the desert, because the way in which they lived, and the way in which he was forced to live in order to preserve life under these primitive conditions as retold in these works, made a deep impression.

Three years after he entered practice in Los Angeles, Doctor Widney exhibited a faculty which has been characteristic and outstanding throughout his life. That is, he established the custom of order in his social relations which was a forerunner of his ethics and contact among men. He was the leading spirit among the founders of the Los Angeles County Medical Association when that organization came into existence, January 31, 1871. In a clear Spencerian hand, which might be described as copperplate, the by-laws of the Los Angeles County Medical Associate were inscribed in a minute book and adopted. It is interesting to note that this association was founded as an association and not as a society, and that it continued as such until about November, 1885. At that time, by-laws were adopted in which the name appeared to be a society, and it continued as such until new by-laws were adopted in 1890. At that time the older term was again used by the Los Angeles County Medical Association. This is rather interesting to note as our national organization was the only medical organization at that time using the term "association"; and only in recent years have the state societies and other county medical societies adopted the term association in lieu of the term "society."

In 1878, Doctor Widney was one of the incorporators of the Los Angeles County Medical Association. This, we believe, was the first medical association to be incorporated

in the United States. As a corporation the organization never functioned actively until 1920. Since that time the organization has been completely functioning as a corporation, and as the legal representative of the California Medical Association.

Doctor Widney's founding in Los Angeles County of the University of Southern California in 1880, and of its first medical school in 1885, were clearly in line with that ethical effort to bring order and progress out of chaos where organization was lacking before.

Doctor Widney never compromised with himself, he never accepted a substitute when there was something better to be had. Throughout his entire life he was an exemplary personality in what he considered to be best adapted to the civilization in which he lived. By his mental and physical efforts he kept the organizations in which he was identified financially solvent, and he kept himself in his ninety-seven years, absolutely independent of the aid of others and left a good dependency when he passed.

Two thoughts outstanding in the last articles that Doctor Widney wrote five days before his death are quite characteristic of the man: Life and death, "The purpose of that drama is—The making of a man: not simply for time, but for eternity." He states the pleasures of Heaven lie in the thought, "I, too, am a sharer in the development of the world that is about me, a sharer with God, therefore forever sharing in the mind of the Supreme Maker of Law."

These are thoughts from the long life of a man who was experienced in the ways of the world and many of its trials and tribulations. In his later years he devoted much of his time to the study of the Scriptures. He spent his life doing good deeds among his fellow-men. He passed into eternal life leaving behind an inspiring record for those who must follow after him.

HARLAN SHOEMAKER, M. D.
JOSEPH M. KING, M. D.
JOHN W. SHUMAN, M. D.



Winston C. Crabtree
1902-1938

Winston C. Crabtree died July 14, 1938, of subacute bacterial endocarditis. He had been ill for about four months.

Doctor Crabtree was a native of Kentucky, having moved, with his parents, to San Diego at an early age. After attending school in San Diego he carried on his undergraduate work at Pomona College. Later he studied medicine at the University of Michigan, graduating in 1928. Following an internship, he did postgraduate work in otolaryngology at the University of Iowa.

Doctor Crabtree returned to San Diego in 1931 and began the practice of his chosen specialty. His fine character and outstanding ability quickly made for him an ever widening circle of friends and admirers, both among his professional colleagues and among the public. His death is an irreparable loss, not only to his family and friends, but also to the medical profession which he served so well.

* Other photographs of the late Dr. Joseph P. Widney appeared in CALIFORNIA AND WESTERN MEDICINE in the following issues: Vol. 44, No. 4, April, 1936, page 292; Vol. 44, No. 5, May 1936, page 396; Vol. 46, No. 6, June, 1937, page 398.

Editorial comment in this issue appears on page 106.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION †

MRS. CLIFFORD A. WRIGHT.....President
MRS. FRED H. ZUMWALT.....Chairman on Publicity
MRS. FRANK H. RODIN.....Assistant Chairman on Publicity

Woman's Auxiliary to the American Medical Association: 1938 Annual Session

The eighty-ninth annual session of the American Medical Association held in San Francisco from June 13 to June 17, 1938, was a success, both scientifically and socially.

The members and guests of the Woman's Auxiliary came from almost every state in the Union and California received them with open arms. San Francisco and her sister county auxiliaries had planned and given their best efforts for the entertainment and comfort of our guests. The whole city seemed to be in a holiday spirit with banners and signs of "Welcome A. M. A. Convention." Even the weatherman was kind and favored us with pleasant weather and glorious sunshine.

We are grateful to Mrs. J. C. Geiger, general chairman of arrangements. We sincerely thank the committee chairmen and their many assistants for the fine program of entertainment. A special vote of thanks to Mrs. John Humber and her assistants for the exquisite floral arrangements which were in evidence everywhere. The decorations added much to the pleasure of our guests, as evidenced by the expressions of admiration and appreciation.

The registration of members and guests, with headquarters at the Fairmont Hotel, started Sunday, June 12, under the able chairmanship of Mrs. Harry O. Hund. The gracious smiles and willing assistance of the many women who assisted Mrs. Hund helped to make our guests feel at home.

The National Board met on Monday morning, after which all gathered at an informal luncheon, convening again at 2 p. m.

In the afternoon there was a choice of sightseeing trips for members and guests. Many took advantage of the trip over the San Francisco-Oakland Bay Bridge to the University of California. They were there the guests of Alameda County Auxiliary for tea at the International House. Gracious hostesses made the afternoon very enjoyable.

Others took a tour of the City of San Francisco, visiting Golden Gate Park, the Japanese Tea Garden, Fleishhacker Pool and Zoo, driving along the shores of the Pacific Ocean, through the Presidio, over the Marina Boulevard to Fisherman's Wharf, ending with a trip through our famous Chinatown. Those who did not care to go on sightseeing trips, played golf, tennis, rode horseback over our beautiful bridle paths or went swimming.

A Chinese dinner planned for the evening, was well attended. Those who dined in Chinatown will tell you that they never had more fun. Have you ever eaten the native Chinese food? It is as good as it is unusual. After dinner the group visited the Chinese Theatre, its dramas and comedies presented in the manner as that of their ancestors of centuries ago. The Joss Houses were very interesting, as was the telephone exchange. The Chinese girl operators must memorize some twenty-five hundred numbers in order to give satisfactory service.

On Tuesday we started very early. Several hundred women attended the Southern breakfast honoring Mrs. Augustus S. Keck. Early morning is so delightful in San Francisco and everyone seemed in very good spirits. If we did give up some of our beauty sleep to get to this breakfast on time, we were well repaid by the inspiring talks by Doc-

†As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Frank H. Rodin, Assistant Chairman of the Publicity and Publications Committee, 2457 Bay Street, San Francisco. Brief reports of county auxiliary meetings will be welcomed by Mrs. Rodin and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the Editor to allocate two pages in every issue to Woman's Auxiliary notes.

tors J. H. J. Upham, Irvin Abell and A. T. McCormick, and the brilliant and witty response by Mrs. Keck.

The tables looked so pretty with their novel decorations of fruit and flowers. The speakers' table was exceptionally beautiful. It whetted our appetites. Seats were not reserved, so we sat where we pleased. What an experience! To be able to talk to women from five different states seated around one breakfast table. After breakfast everyone dashed off to the formal opening of the general meeting of the Woman's Auxiliary to the American Medical Association.

At noon more than a thousand women gathered for a boat trip and luncheon to be served on Treasure Island, where one got a preview of the 1939 World's Fair. A hill-billy orchestra entertained during luncheon. The excursion took the guests around the beautiful San Francisco Bay, viewing our magnificent bridges, Alcatraz Island, up the Estuary in Oakland and to many other places of interest.

The general session of the American Medical Association convened in the evening in the Memorial Opera House. Hon. Angelo Rossi, mayor of San Francisco, welcomed the august body of the American Medical Association. Musical selections, rendered during interludes, made the meeting enjoyable and interesting.

The Aloha luncheon, honoring Mrs. Charles C. Tomlinson of Omaha, Nebraska, took place on Wednesday. Mrs. Augustus S. Keck presided, and introduced Mrs. Tomlinson, the new president of the Woman's Auxiliary to the American Medical Association.

Again the table decorations were most beautiful. The speakers' table was a riot of delicate shades of the exquisite tuberous begonia and foliage. These were particularly interesting to the women from distant states, where these blossoms do not grow.

Doctors Walter Donaldson and Irvin Abell were the guest speakers. They stressed the importance of the woman's auxiliaries to the medical associations and the need for every doctor's wife to be armed with knowledge to help guard the high standards of scientific medicine and to help combat subversive legislation and quackery. The women were becoming more and more useful as an adjunct to the medical societies in the communities where they are organized, we were told.

The closing ceremony was most beautiful and awe-inspiring. An old Polynesian Lei ceremony was adapted for this purpose, through the courtesy of Mrs. A. T. Newcomb of Pasadena. To the soft music of an Hawaiian orchestra, Mrs. William Henry Sargent of Oakland recited the commentary to this Polynesian rite.

Thus ended the meeting of the Woman's Auxiliary to the American Medical Association for 1938.

* * *

The home of the San Francisco County Medical Society is housed in one of San Francisco's old residences, which adapted itself so conveniently for the lovely reception held Wednesday evening for Auxiliary members and doctors' wives.

Over four hundred women gathered to enjoy the evening, which offered music, a fashion show and refreshments.

This was a background for the harp selections rendered by the talented Miss Ann Everingham, daughter of an Alameda Auxiliary member. Attractive manikins displayed beautiful summer costumes through the courtesy of I. Magnin & Company. Miss Helen Zumwalt, gifted daughter of a San Francisco member, sang Viennese songs, dressed in picturesque Vietnamese costume. A bridal party, gorgeously gowned, completed the fashion show. Eva Grunenger Gibson, our own dear president of the San Francisco County Auxiliary, closed a perfect evening with vocal selections. Miss Gladys Steele accompanied Mrs. Gibson and Miss Zumwalt.

Santa Clara and San Mateo County auxiliaries were hostesses on Thursday for lunch at the Allied Arts in Palo Alto.

The guests started on the motor trip from San Francisco at 11 o'clock, traveling by way of the Skyline Boulevard, visiting Stanford University and reaching the Allied Arts for lunch. They returned over the Bay Shore Highway.

After lunch another scenic tour was taken over the Golden Gate Bridge into Marin County, visiting Muir Woods and Mt. Tamalpais.

One of the most interesting features of the Auxiliary convention were the exhibits presenting outstanding work and interesting activities sent in by auxiliaries from nearly every state in the Union. We may, indeed, be proud of such an active program as these exhibits presented. They were all so fine, one could not choose; each seemed to vie with the other for importance. In this room a musical program was given on Thursday afternoon. Mrs. Ily R. Beir of Atlantic City, New Jersey, is to be congratulated on the fine work she has done as national chairman of this department.

The closing events of the convention were the "Bring your husband" dinner held at the Fairmont Hotel and the President's reception and ball that followed at the Palace Hotel.

Mrs. Otis Floyd Lampson of Seattle, Washington, was the hostess at the dinner and Mrs. Harold G. Trimble of Oakland was chairman of arrangements.

On entering the dining room one's breath was taken away by the picturesque arrangement of the decorations. Mrs. John Humber and her committee seemed to have performed a miracle with the arrangement of the flowers. Tables were set for parties of eight and ten. The flowers were white, artistically set in shining copper bowls. The speaker's table was beautifully decorated with delicate white calla lilies in gleaming high brass containers and large candelabra with many white candles.

The Doctors and Dentists' Orchestra of Alameda County furnished the music during dinner.

Unknown to the committee on decorations, Dr. and Mrs. Charles C. Tomlinson were celebrating the twenty-ninth anniversary of their wedding, so the bridal appearance of the dining room fitted perfectly into the scheme of events. Mrs. Trimble, after being introduced by Mrs. Lampson, extended congratulations and best wishes, and presented the happy couple with an old-fashioned bouquet of gardenias.

In closing, Mrs. Trimble drew a beautiful word picture of the romantic parting when one leaves the Hawaiian Islands, saying: "Aloha, until you and I meet again next year."

The President's reception and ball also had its very pretty settings, and everyone enjoyed the gracious hospitality, music and dancing.

* * *

A few words about the convention meetings of the National Auxiliary.

The first general session of the Auxiliary was held on Tuesday morning at the Fairmont Hotel. Mrs. Augustus S. Keck presided in her dignified and charming manner. Mrs. J. C. Geiger, general chairman, was introduced and made the necessary announcements. The invocation was given by Rev. George H. B. Wright, Cannon, Grace Cathedral.

The address of welcome was given by our own State President, Mrs. Clifford A. Wright of Los Angeles, as follows:

Welcome, members and friends of the Woman's Auxiliary to the American Medical Association! California Auxiliary members extend greetings and offer the hospitality of the West—a hospitality which knows no bounds.

To reach this most western city on the shores of the great Pacific, you have crossed deserts, mountains and water. Some have come by automobile or boat, others by train, and there were those who took that still almost unbelievable mode of rapid transportation, the airplane. We hope you enjoy your visit and that the benefits and pleasure you receive will compensate you for the distances you have traveled and for the inconveniences that may have been yours.

Romantic, historic old San Francisco is teeming with the traditions of an early settlement on the shores of one of the world's most marvelous natural harbors. The Gold Rush days of California and the spending of the wealth of Nevada silver added much to the development of this part of the country. May you partake of the old and the new that surround you in this, your hostess city.

The East is East; the West is West; the two have met on common ground. Renewing old friendships, forming new ones; loyal to our husbands and to the medical profession to which they pledged their lives. The medical men are the life guards of the world.

You have returned to the place of your birth, triumphant. California is proud of you, your growth and accomplishments. Again may I say welcome. May you find in the West the glorious Golden West, the share of joy and happiness that we know is here for you.

The response was given by Mrs. Rollo K. Packard of Illinois, as follows:

It is a pleasure to respond on behalf of the Woman's Auxiliary to the American Medical Association to the welcome just extended, and to express our appreciation for the splendid work of the various committees.

It seems quite fortunate both for the old and the new members here in attendance that, in these more or less troubled times for all mankind, we are privileged to come here to the scenic, colorful and natural beauty of California and enjoy the hospitality of this great city and its great people.

It has been my good fortune to have visited this great state several times and to have motored over the highways and byways of a considerable part of it. I shall not attempt to describe it, although more gifted have tried. Really, the Californians cannot describe it.

I only hope that you will find time to linger on a few days or weeks and enjoy the varied interests that await you.

You must know California's history, its struggles and its determinations. You must see it by sunrise, by sunset and by moonlight, and then you will want to see it all over again, and finally you will want to come here to live."

The "In Memoriam" was very beautifully and spiritually given by Mrs. Daniel J. Swan of Flushing, New York. Mr. Frank Houser played soft melodies on his violin during the roll call.

The chairmen of convention committees reported: Mrs. Harry O. Hund, credentials and registrations; Mrs. Charles Rayburn, convention rules; Mrs. Hobart Rogers, resolutions.

The president, Mrs. Keck, read her message.

The reports of the corresponding secretary, recording secretary, treasurer, auditor and standing committees followed.

Mrs. Charles C. Tomlinson, president-elect, of Omaha, Nebraska, was introduced by Mrs. Keck.

After further announcements the meeting was adjourned to convene again the following morning.

Wednesday morning: Mrs. Keck presided. The minutes were read and the following reports were made: Mrs. J. C. Geiger, convention committees; Mrs. Harry O. Hund, credentials and registrations; Mrs. Hobart Rogers, resolutions.

The state presidents read some very glowing reports of the activities of their auxiliaries which were very interesting and inspiring.

The nominating committee presented the names proposed for election. There being no nominations from the floor, the officers were elected as presented by the nominating committee.

In the absence of Mrs. Arthur B. McGlothian, Mrs. James F. Percy of Los Angeles installed the newly elected officers with a very inspiring ceremony.

After the reading of the courtesy resolutions, and the minutes, the official meeting of the Woman's Auxiliary to the American Medical Association came to an end and was adjourned.

The following very interesting and informative conferences were held on Wednesday afternoon under the leadership of the various chairmen as follows: Public relations and health education, Mrs. A. Haines Lippincott; program, Mrs. V. E. Holcombe; Hygeia, Mrs. James Lester.

MRS. FRANK H. RODIN.

Re: Washington, D. C., Press Dispatches.—"The proposition to socialize the medical profession is in line with a number of other things designed to come under government control in these later days. When people are regimented to summon medical care through government-politico dictation they won't care to get well, for next thing the government will attempt to administer the last sacrament and conduct the funeral."—*Reseda News*.

"From his experiments in human learning Thorndike has concluded—"Learning without interest of some sort does not occur in any appreciable degree." Therefore it is most ineffective to bombard the population with health facts or urge them to improve their practices if they have no interest in the facts or in changing their habits."—*The Health Officer*.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under *Miscellany*.

NEWS

Coming Meetings

American Medical Association, St. Louis, Missouri (date to be announced later). Olin West, M.D., Secretary, 535 North Dearborn Street, Chicago, Illinois.

California Medical Association, Hotel Del Monte, May 1 to 4, 1939. George H. Kress, M.D., Secretary, 450 Sutter Street, San Francisco.

Medical Broadcasts*

Los Angeles County Medical Association

The radio broadcast program for the Los Angeles County Medical Association for the month of August is as follows: Thursday, August 4—KECA, 11:00 a.m., The Road to Health. Saturday, August 6—KFI, 9:00 a.m., The Road to Health; KFAC, 11:30 a.m., Your Doctor and You. Thursday, August 11—KECA, 11:00 a.m., The Road to Health. Saturday, August 13—KFI 9:00 a.m., The Road to Health; KFAC, 11:30 a.m., Your Doctor and You. Thursday, August 18—KECA, 11:00 a.m., The Road to Health. Saturday, August 20—KFI, 9:00 a.m., The Road to Health; KFAC, 11:30 a.m., Your Doctor and You. Thursday, August 25—KECA, 11:00 a.m., The Road to Health. Saturday, August 27—KFI, 9:00 a.m., The Road to Health; KFAC, 11:30 a.m., Your Doctor and You.

1938 Rural Health Conservation Contest Announced. The Chamber of Commerce of the United States and the American Public Health Association have announced the 1938 Rural Health Conservation Contest, the fifth of a series of competitions designed to further the development of sound rural public health work, and to stimulate needed improvement in community health services.

Any district or county health unit providing whole-time health services is eligible to participate in the contest. Whole-time health departments of California have, during past years, enrolled in these contests, and some of them have succeeded in winning awards. It is hoped that a large number of California counties will enter into the 1938 contest.

Some of the advantages to local health units that may take part are stated as follows:

1. It provides a means (the public health committee) of bringing about a substantial, sustained and intelligent lay interest in public health.
2. It promotes the keeping of adequate comparable records which can be used in measuring progress.
3. Through the inclusion of all agencies, groups and individuals engaged in the public health work the contest:
 - (a) Presents a clearer and more complete picture of the community-wide public health program than was, perhaps, heretofore available.
 - (b) Tends to develop a community-wide esprit de corps and public health consciousness.
 - (c) Encourages the more effective use and integration of all the community's facilities for public health betterment.
 - (d) Through giving definite credit for work done by private practitioners of medicine and dentistry encourages the increasing practice of preventive measures by these two all-important groups.

* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to *CALIFORNIA AND WESTERN MEDICINE*, 450 Sutter Street, San Francisco, for inclusion in this column.

Western Division of the American Society for the Control of Venereal Diseases Organized.—Following some months of consideration, the American Society for Control of Venereal Diseases, organized last year, has merged with the American Social Hygiene Association. Activities will be promoted in the Pacific Coast and Mountain States through a *Western Division Office* under the direction of a western advisory committee including Dr. Russell V. Lee, President Ray Lyman Wilbur, Dr. William P. Shepard, Dr. Thomas A. Storey, and Ray Smith, W. F. Higby, who has long been interested and active in social hygiene work, and is an experienced administrator, will be responsible for executive direction. Alan Blanchard, a recent recruit to social hygiene, will work at the educational and public information program. Mrs. Marion Simonson, American Social Hygiene Association field representative, who has been on the West Coast since March, will remain until the end of June to work with the new staff, look after exhibits and confer with delegates at meetings of the American Medical Association, the Western Division of the American Public Health Association, the United States Junior Chamber of Commerce, and the National Conference of Social Work.

Western friends and members we know will welcome this new plan and we hope will make full use of the facilities available. Address of the new office is 45 Second Street, San Francisco, California.

American Public Health Association.—The preliminary program of the scientific sessions of the sixty-seventh annual meeting will be held in Kansas City, Mo., October 25 to 28, with more than 3,000 professional public health workers in attendance.

The program comprises fifty morning and afternoon meetings arranged by the ten sections of the Association, which are: Health Officers, Laboratory, Vital Statistics, Public Health Engineering, Industrial Hygiene, Food and Nutrition, Child Hygiene, Public Health Education, Public Health Nursing, Epidemiology.

Special sessions are planned on Public Health Aspects of Medical Care, Oral Hygiene, Professional Education and Diphtheria Immunization. A public meeting under the auspices of the local committee is scheduled for Wednesday evening, October 26, with Dr. E. V. McCollum discussing Milk Pasteurization and Dr. Arthur T. McCormack on New Responsibilities of the Health Officer.

There will be symposia on industrial hygiene administration, venereal disease control, laboratory diagnostic methods, expanding responsibilities in public health engineering, maternal and child health, frozen desserts, industrial hazards, water and sewage, typhoid fever, the next steps in school health services, milk and dairy products and many other important subjects.

A few of the well known names on the program are as follows: Colonel A. Parker Hitchens, Dr. Earle G. Brown, Dr. Haven Emerson, Surgeon-General Thomas Parran, Joel I. Connolly, Dr. Nina Simmonds, Dr. Karl F. Meyer, Dr. Walter Clarke, Professor C.-E. A. Winslow, Dr. George C. Ruhland, Dr. William A. Sawyer, Dr. Walter H. Eddy, Dr. Frank G. Boudreau, Sol Pincus, Dr. Martha M. Eliot, Dr. Abel Wolman, Dr. Robert S. Breed and Dr. Felix J. Underwood.

More than 300 papers and committee reports will be presented during the four-day meeting. They will cover the what, how and why of modern public health practice in the United States.

The preliminary program is printed in full in the August issue of the *American Journal of Public Health*, published by the American Public Health Association at 50 West Fiftieth Street, New York, N. Y.

Postgraduate Medical Courses for Practicing Physicians: Stanford University School of Medicine.—Stanford University School of Medicine, in co-operation with the San Francisco Department of Public Health and the San Francisco Hospital, announces a series of postgraduate courses to be given September 12-16, 1938, inclusive. The registration fee is \$25. Additional fees of \$10 will be made to cover the cost of materials used in Course 8, Surgical Anatomy and Operative Technique, and in Course 10, Otorhinolaryngology. Each physician may take a morning and an afternoon course and all physicians should attend the evening general meetings. Registration closes September 6, 1938. Applications for registration in these courses should be mailed to the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco, not later than September 6. Outlines of the courses follow:

MORNING COURSES

Monday, Tuesday, Wednesday, Thursday and Friday, 8:30-12:00
Course 1—Traumatic Injuries, Acute Abdominal Emergencies and Fractures (At San Francisco Hospital)

This course will deal with the handling of abdominal and other emergencies, traumatic injuries, and the diagnosis and treatment of fractures.

Course by Doctors J. W. Cline, Delbert Hand, Nelson Howard, Donald King, Carleton Mathewson, J. M. Meherin, E. J. Morrissey, W. L. Rogers and E. B. Towne.

Course 2—Gynecology

This course will deal exclusively with gynecologic problems. Medical gynecology will be stressed. This will include the treatment of cervicitis, trichomonas infection, sterility, urinary infections, preparation and use of pessaries. Some time will be devoted to the discussion of surgical indications and surgical methods. Endocrine problems dealing with menstrual disorders will be included if desired by the majority of applicants.

Course by Doctors L. A. Emge, C. F. Fluhmann, A. V. Pettit, K. L. Schaupp, H. A. Stephenson and Hans von Geldern.

Course 3—Ward Rounds in Medicine (Two sections limited to fifteen physicians in each section)

This course will consist of rounds in the medical wards, with conferences and demonstration of patients presenting problems in internal medicine, to be followed by discussions of the specific diagnostic procedures and therapy. Clinico-pathological conferences will be part of this course.

Section at Lane Hospital by Doctors C. W. Barnett, A. L. Bloomfield, Garnet Cheney, William Dock, E. F. Holman, G. S. Johnson, J. K. Lewis, G. S. Mirick, R. R. Newell, W. H. Northway and D. A. Ryland.

Section at San Francisco Hospital by Doctors George D. Barnett, D. K. Burnham, A. J. Cox, L. H. Garland, H. P. Hill, Lovell Langstroth, Carleton Mathewson, Carol McKenney, J. M. Read, Robert Shelton, C. F. Sweigert, Edgar Wayburn, D. L. Wilbur and J. M. Wolfsohn.

Course 4—Diseases of the Chest

This course will review diseases of the chest by demonstrations and clinics, including history, physical examination, differential diagnosis and treatment, together with an x-ray, pathological, and medical-surgical symposia. The problem of tuberculosis as it involves the general practitioner will be stressed.

Course by Doctors W. G. Burkhard, Leo Eloesser, E. F. Holman, R. R. Newell, P. H. Pierson, Martin Seid and D. A. Wood.

AFTERNOON COURSES

Monday, Tuesday, Wednesday, Thursday and Friday, 1:30-5:00
Course 5—The Practical Management of Hypertension and Nephritis in the Doctor's Office

Information derived from ambulatory patients, in conjunction with the results of new laboratory methods designed for use in the doctor's office, will be used for the discussion of diagnosis and as a basis for the planning of treatment.

Course by Doctors Thomas Addis and D. A. Ryland.

Course 6—Pediatrics

This course will review four general groups of pediatric problems: (1) the care of normal infants and children, including infant feeding; (2) the prevention of disease, including deficiency diseases and methods of immunization; (3) the commoner disorders and diseases of childhood, including the communicable diseases; (4) disturbances of mind and behavior, and methods of child guidance. Surgical problems will also be discussed.

Course by Doctors L. R. Chandler, L. B. Dickey, H. K. Faber, D. C. Marshall, J. J. Miller, J. C. Parrott, M. I. Preston, A. P. Purdy and R. P. Seitz.

Course 7—Proctology

This course will review the common lesions of the large bowel, rectum and anal canal, including technique of examination, methods of office treatment, operative indications and technique, pathology, differential diagnosis, etc.

Course by Dr. Robert Scarborough.

Course 8—Surgical Anatomy and Operative Technique (Limited to twenty-four physicians)

This course will be conducted in the dissecting room and the experimental laboratories; will include dissection of special regions and instruction and practice in the technique of various operations.

An additional fee of \$10 will be made to cover the cost of material used in this course.

Course by Doctors Donald King and G. W. Nagel.

COURSES FOR SPECIALISTS

Monday, Tuesday, Wednesday, Thursday and Friday Mornings, 9:00-12:00; Afternoons, 2:00-5:00

Course 9—Anesthesiology (Limited to six physicians. Only those whose practice already includes anesthesiology will be eligible to this course)

This course will review preliminary medication; the newer anesthetic agents; the rectal, intravenous, and inhalation methods of administration; spinal anesthesia.

Course by Doctors Emile Andersen, E. H. Case, Adena Dutton, W. Golterneke, W. B. Neff, L. A. Rethwilm, J. A. Stiles and L. Wright.

Course 10—Otorhinolaryngology (For specialists only; general practitioners are not eligible for this course)

This course will cover anatomy, physiology, pathology; practical operative work on cadavers; treatment of diseases of the ear, nose, and throat.

An additional fee of \$10 will be charged to cover the cost of anatomical materials used in this course.

Course by Doctors R. E. Ashley, J. A. Bacher, C. B. Cowan, S. V. Christierson, F. D. Fellows, W. M. Fitzhugh, H. A. Fletcher, H. B. Graham, H. Y. McNaught, R. C. McNaught, P. J. Moses, A. G. Rawlins and E. C. Sewall.

GENERAL MEETINGS

Tuesday, Wednesday and Thursday Evenings, Lane Hall, 8:00-10:00 o'clock

Meeting 1. Tuesday evening, 8:00-10:00 o'clock Surgical Pathology; Clinico-pathological Conferences

Dr. D. A. Wood

Meeting 2. Wednesday evening, 8:00-10:00 o'clock Relation of Sex Hormones to Cancer

Dr. L. A. Emge

Disease of the Thyroid Gland

Doctors E. F. Holman and D. L. Wilbur

Meeting 3. Thursday evening, 8:00-10:00 o'clock

Diagnosis and Modern Treatment of Common Dermatoses

Doctors H. E. Alderson and M. T.-R. Maynard

Doctor Reed to Speak on World Health at Amsterdam.—A sort of diagnosis of the present health status of the world at large is to be presented to the Third International Congress of Tropical Medicine and Malaria in Amsterdam on September 25, by Dr. Alfred C. Reed, president-elect of the American Society of Tropical Medicine and member of the faculty of the Hooper Foundation for Medical Research in the University of California.

The effect of wars, widespread soil erosion, shifting economic conditions, natural disasters, transportation breakdown, epidemics and related conditions on the health of the human race is being outlined in Doctor Reed's Amsterdam paper.

Previous to attending the Congress at Amsterdam, Doctor Reed will visit the London School of Tropical Medicine and various other centers of the same type on the Continent. Doctor Reed's investigations into world health conditions will take him to Beirut, Damascus, Jerusalem, Cairo, Rhodes, Athens, Italy, France, Stockholm and Copenhagen.

Doctor Reed will return by way of Oklahoma City for the meeting of the American Society of Tropical Medicine, November 14-17. Doctor Reed will assume the presidency of the Society at this meeting.

U. C. Extension Course on Foods.—Miss Nina Simmonds, Ph. D., lecturer in medicine, and research associate in dentistry, University of California, will conduct a University Extension course in foods and nutrition this fall, according to a recent announcement. The course has been planned for dentists, dental hygienists, physicians, public health nurses, social case workers, and others interested in modern developments of nutrition. The tentative date for the opening of the course is Wednesday, September 21, at 8 p. m., 540 Powell Street, San Francisco.

California Hospital, Los Angeles, Holds Annual Jinks.—The announcement of the annual outing meeting of the attending staff of the California Hospital of Los Angeles, an institution founded in the nineties by the late Dr. Walter Lindley and other leaders in the old College of Medicine of the University of Southern California, gave the following interesting information:

Time—July 23, from 2:00 p. m. until—

Place—Updifter's Ranch, Santa Monica.

Purpose—Good, wholesome, frolicking fun.

Competitive Sports—Baseball, sprinting events, horseshoe pitching, African golf, bridge, special internes' race—many other novel stunts and contests as usual.

Dinner—Delicious barbecued steaks and fixings.

Floor Show—Guarantee no copyright infringement, new talent (completely disguised), new everything. Post mortem session at the club house.

American Congress of Physical Therapy.—The seventeenth annual scientific and clinical session of the American Congress of Physical Therapy will be held cooperatively with the twenty-second annual convention of the American Occupational Therapy Association, September 12, 13, 14 and 15, 1938, at the Palmer House, Chicago. Preceding these sessions, the Congress will conduct an intensive instruction seminar in physical therapy for physicians and technicians—September 7, 8, 9 and 10.

The convention proper will have numerous special program features, a variety of papers and addresses, clinical conferences, round table talks, and extensive scientific and technical exhibits.

The instruction seminar should prove of unusual interest to everyone interested in the fundamentals and in the newer advances in physical therapy. The faculty will be comprised of experienced teachers and clinicians; every subject in the physical therapy field will be covered. Information concerning the convention and the instruction seminar may be obtained by addressing the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago.

American College of Surgeons.—A clinical congress of the American College of Surgeons, founded by surgeons of the United States and Canada in 1913, will be held during the twenty-eighth annual session, New York, October 17-21, 1938.

The surgeons of that great medical center, under the leadership of representative committees, are preparing a five-day clinical program that will provide a complete showing of their clinical activities in all departments of surgery. An outline of the clinical program is published in the June Bulletin of the College and the July number of "Surgery, Gynecology and Obstetrics." It will be noted that the clinical schedules are arranged by specialties, and so correlated that the visiting surgeon may plan to devote his time continuously to those special subjects in which he is most interested.

A symposium on "Graduate Training for Surgery and the Surgical Specialties" will feature the opening session of the Congress on Monday morning. At the presidential meeting and convocation, on Monday evening, the retiring president, Dr. Frederic A. Besley, will deliver the presidential address. This will be followed by the inauguration of the new officers and the conferring of fellowships upon the 1938 class of initiates. On succeeding evenings scientific papers on topics of timely importance will be presented by American and Canadian surgeons and distinguished visitors from abroad.

Outstanding features of the Congress program are: Conferences and symposia on fractures, cancer, obstetrics and gynecology, genito-urinary surgery, and traumatic surgery. Midday round-table conferences will provide a forum for the open discussion of many important surgical subjects.

American Association for the Study of Goiter.—The annual meeting of the American Association for the Study of Goiter for this year will be held in Washington, D. C., September 12, 13 and 14 in conjunction with the Third International Goiter Conference. A final program will be available at the time of the meeting and will be distributed to all attending physicians at the registration desk on the morning of September 12. For information, write to W. Blair Mosser, M.D., Corresponding Secretary, Kane, Pa.

The American College of Physicians.—The twenty-third annual session of the American College of Physicians will be held in New Orleans, with general headquarters at the Municipal Auditorium, March 27-31, 1939. Dr. William J. Kerr of San Francisco is president of the college, and will have charge of the program of general scientific sessions. Dr. John H. Musser of New Orleans has been appointed general chairman of the session, and will be in charge of the program of clinics and demonstrations in the hospitals and medical schools, and of the programs of round table discussions to be conducted at the headquarters.

Excerpt from a Letter Received from an Attorney Friend, After Perusal of Legal Counsel Peart's Opinion.* . . . "From such knowledge as I have of the (Los Angeles County Hospital) situation, however, I cannot help feeling that Mr. Peart's opinion is correct. I might add, not as a matter of law but as a matter of personal opinion, that any law that permits a state, county, or city to hound anybody and everybody who has ever had to seek public relief, either for "support" or for hospital service, if that once unfortunate person is ever able to acquire property or earn a livelihood not exempt from attachment or garnishment, is a brutal law. Certainly a law of that kind, if needed at all, should be limited so as to permit the state, county, or city to recoup only from those who subsequently acquire wealth or earnings sufficient to justify that procedure."

Big Health Museum May Spring from 1939 Exposition.—A permanent public health museum, perhaps the first in the United States, which would reveal many of the present secrets of plague suppression, and the campaigns against such epidemics as typhoid, tuberculosis and diphtheria, will be one of the principal developments of the Golden Gate International Exposition, if plans now being drawn up by the American Public Health Association finally materialize. It is hoped to locate the museum somewhere in the San Francisco Bay region, possibly in San Francisco. It will be so set up that displays of specimens and procedures may be sent to any point in the West and to the three Canadian provinces claiming membership in the Association.

Preliminary plans for the museum were discussed at the tenth annual meeting of the Association in Portland, June 6 to 8, on which occasion more than 500 public health officers from all parts of the country and from the provinces of British Columbia, Saskatchewan and Alberta, discussed the health needs of the individuals and communities under their jurisdiction. The plans that public health groups are making to exhibit at the big San Francisco Exposition were compared and detailed, and the unanimous opinion was reached that this fine array should be consolidated into a single museum when the Exposition is over. Committees were appointed to draw up a plan. It is understood that eastern interests are considering a like museum to house the public health displays at the New York world's fair.

The western branch of the Association is presided over by Dean Guy F. Millberry of the University of California College of Dentistry here. This branch includes the eleven western states, the three Canadian provinces mentioned, and Alaska, and has jurisdiction over the public health activities of 16,000,000 people. At the Portland meeting, a paper by Dr. Karl F. Meyer, director of the Hooper Foundation of Medical Research of the University, described the ravages of sylvatic plague now sweeping through the rodent populations of the West. The Association plans to hold its 1939 meeting in or near San Francisco.

* Opinion of Mr. Peart appears on page 157.

Solano and Sonoma Organize Full-Time Units.—The boards of supervisors of both Solano and Sonoma counties have organized their county health departments into full-time units, effective July 1, 1938. Both units will include all unincorporated territory within their respective boundaries.

Dr. A. Frank Brewer of Berkeley has been appointed health officer of Solano County. Two public health nurses, a sanitary inspector, and a clerk, all employed full time, will comprise the staff. The organization of the Sonoma County unit is in process of completion.

With these two new units, there are now twenty-four counties of California, the health departments of which are conducted by employees who devote their whole time to the duties of their respective offices. These counties are: Alameda, Contra Costa, Fresno, Imperial, Kern, Los Angeles, Madera, Monterey, Orange, Riverside, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Cruz, Solano, Sonoma, Stanislaus, Tulare, Ventura, Yolo.

Venereal Disease Prevention: Federal Appropriations.—Venereal diseases were given fresh recognition as a national problem when both Houses of Congress recently passed the La Follette-Bulwinkle bill authorizing federal aid to the states for the prevention and control of these diseases. With President Roosevelt's signature on May 25, this bill became a law authorizing appropriations to be made for each of the fiscal years 1939, 1940 and 1941 of three, five and seven million dollars, respectively, and such amounts annually thereafter as may be necessary. The next step necessary was appropriation by Congress of the first \$3,000,000 for the year beginning July 1, 1938. This appropriation was finally included in the second deficiency bill and went to the Conference Committee of the House and Senate June 15, was reported favorably, voted, and sent to the President June 16. Grants will be made to the states, territories and insular possessions on the basis of population, prevalence of venereal diseases and need for federal assistance. State health officers and the U. S. Public Health Service will jointly decide upon what projects the grants will be spent.

A nation-wide survey conducted last month by the American Institute of Public Opinion showed the consensus overwhelmingly in favor of such a program of federal aid. Throughout the country 86 per cent of those questioned said "Yes" to the query: "Do you think Congress should appropriate money to aid states in fighting venereal disease?"

Pacific Coast Survey of Safety Laws and Orders.—Safety laws and orders of eleven western states are the subject of a survey to be made by a new WPA project at a cost of \$10,000. This project, just approved by the Federal Government at Washington, will be directed by C. H. Fry, chief of the Industrial Accident Commission of California, and interim chairman of the Western Safety Conference to be held in Los Angeles, September 12-16.

Under the provisions of the project, twenty-seven experienced safety engineers and attorneys will unite in recodifying all safety laws and orders for the prevention of accidents in traffic, the home and in industrial vocations.

Aiding in the movement are the states of California, Oregon, Washington, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona and New Mexico, which are subjects of the survey, as well as British Columbia, Alaska, Hawaii and Lower California.

Uniform safety laws have long been the dream of safety engineers and others interested in a lowering of the terrific loss of life from all public and industrial causes. Plans have been made for a series of conferences at the Western Safety Conference which are expected to have a far-reaching effect.

It is expected that the conclusions reached by the several thousand safety experts attending the conference will be of great value in the deliberations of the experts making the survey, many of whom will take part in the conference.

Industrial accidents will receive special consideration, as will traffic hazards caused by the difference in the traffic laws of the several states. This phase of accident prevention is of special importance to states visited annually by thousands of tourists.

International Medical Postgraduate Courses in Berlin.—In the autumn of 1938, international medical post-graduate courses are prospected.

For programs and further information apply to the Geschäftsstelle der Berliner Akademie für ärztliche Fortbildung, Berlin NW 7, Robert Koch-Platz 7 (Kaiserin Friedrich-Haus).

Foreign doctors and German doctors resident abroad are granted a reduction of fare of 60 per cent on the German Railways Company's lines; a foreign doctor can reduce the cost of his stay considerably by utilizing what are called "registered marks"; it is advisable to arrange matters with the local bank before starting.

Five High Awards Won by University of California at Big Medical Meeting.—Five of the twenty-four special awards for exhibits at the annual convention of the American Medical Association, held recently in San Francisco, went to the University of California Medical Center. This is considered particularly significant in view of the fact that many exhibitors were entered from all parts of the country. The value of the exhibits, biological, pathological and mechanical, was in excess of \$1,000,000.

One of the most outstanding awards, the silver medal for exhibits showing the result of individual investigations, went to Hermann Sommer of the Hooper Foundation for Medical Research, a part of the University's medical center. Sommer had a particularly fine exhibit illustrating plankton and paralytic shellfish poisoning.

In the same category, Dr. John A. Marshall of the College of Dentistry received an honorable mention for an exhibit on clinical dental pathology.

The bronze medal for exhibits judged on the basis of excellence of presentation went to Dr. R. J. Reitzel and Dr. S. P. Lucia of the Division of Medicine, and Dr. Karl F. Meyer, director of the Hooper Foundation, for an exhibit illustrating clinical and epidemiologic demonstration of various infectious diseases.

Rudolph Skarda, research assistant in the Division of Anatomy, was given a certificate of merit for an exhibit illustrating anatomical surgical preparations.

Honorable mention was given Dr. LeRoy C. Abbott, Dr. F. C. Bost and Dr. John B. Saunders for their exhibit showing development of a technique for leg lengthening and reducing and otherwise treating fractures of the hip.

New Values Found for Health Factor in Oranges, Etc.—A significant new meaning has been given to the output of the orange grove, the truck garden and every other source of the potent vitamin C, through investigations into rheumatic fever made by the division of pathology of the University of California Medical School. These experiments have gone far to determine that vitamin C deficiency may be a contributory factor in the causation of rheumatic fever. At least two ounces of orange juice a day for both adults and children, or an adequate consumption of cabbages, tomatoes and other truck garden products rich in this vitamin, are suggested as a direct aid to the prevention of this disease, now considered a public health problem of major importance.

The studies of the division were made particularly with children and added new strength to the theory that the disease finds lodgment in the systems of undernourished children particularly. Many studies reveal the dominant occurrence of rheumatic fever among the poor. It is in the main a disease of childhood, the maximum incidence occurring between the ages of 5 and 12 years. It appears to be particularly prevalent in temperate countries and in the United States. The highest incidence of the disease is in the late winter and spring.

The comparative rarity of rheumatic fever and rheumatoid arthritis in Holland has been indicated by at least one outstanding authority and the importance of truck gardening and dairying in that country suggests that the local dietary might be more than adequate in vitamin C containing foods.

Studies made of the blood of children with rheumatic fever seems consistent with the idea of an absence of adequate amounts of vitamin C, according to Dr. James F. Rinehart, associate professor of pathology, who conducted the study for the Medical School.

New York Polyclinic Medical School and Hospital.—A special department of Facial Palsy has been established at the New York Polyclinic Medical School and Hospital for teaching purposes, with clinics every Thursday at 2 o'clock. This department is in charge of Dr. Thomas G. Tickle and his staff.

Hospital Gives Flowers Along with Medicine.—The University of California Medical Center has just prescribed a bouquet of flowers once a week to every patient in both hospital and public clinics.

Impressed by the peace of mind, the atmosphere of beauty and the general comfort that flowers bring to the sick, the staff of the Center has entered heartily into the activity of its volunteer unit in supplying fresh seasonal blooms for every tray. So far as is known, this is the only hospital in the country that has made the regular distribution of flowers a part of its routine.

So quickly has the idea "caught on" and so much benefit has resulted thus far, that the unit is now planning a "wild flower day," on which every patient will be given a bouquet or a spray fresh from California's verdant hillsides. It is hoped to hold this day in the early spring.

The flowers are now being obtained from the homes of many of the doctors, who bring the blossoms to the hospitals along with their instrument cases, from the gardens of many friends of the Center and from the grounds of the Center itself, portions of which are beautifully landscaped. The activity is under the direction of Mrs. Philip Caxon, head of the volunteer unit.

The unit is composed of volunteer women workers who devote their spare time to aiding the sick and distressed. Thus far it has been enabled to obtain enough flowers once a week for every patient. Most of the patients take every precaution to keep each bouquet as fresh as possible until the next bouquet arrives, so that they will have flowers at their bedside at all times. Even the most "desperate" cases seem able to obtain rest and comfort from the flowers, Mrs. Caxon reports.

The regular arrival of the bouquets is proving a boon particularly to the clinic patients, many of whom are unable to raise gardens or have any flowers of their own.

Sale of Certain Rodents Restricted in California.—Because chipmunks, golden mantled squirrels, and other rodents have been found to suffer from plague, the California State Board of Public Health has imposed restrictions upon the sale of such rodents as indicated in the following resolution of the board, issued August 17, 1937. The general public is advised not to handle such rodents, and dealers are warned that the requirements of this order must be observed:

"WHEREAS, It has been determined that plague infection has been found to exist in chipmunks in certain areas in California and other western states, and furthermore, it has been determined that this infection may be transmitted to man; and

"WHEREAS, It has become urgent to take all necessary precautions to prevent the transmission of plague infection to human beings as well as to protect this state in its sanitary relation with other states and countries; therefore,

"Be it ordered, under the authority vested in the Director of Public Health by Sections 2979 and 2979a of the Political Code of California, and the Public Health Act of this state, as amended, that the shipment or sale of chipmunks and/or golden mantled squirrels or other wild rodents be prohibited unless said chipmunks or golden mantled squirrels or other wild rodents are held in quarantine for a period of two weeks prior to date of shipment or sale, in either domestic or foreign trade. During this period of quarantine said animals are to be maintained in individual cages and any animal dying during the period of observation shall not be destroyed but shall be reported at once to the local health officer. The health officer shall thereupon communicate with the State Department of Public Health for instructions regarding the shipment of the animal to the state laboratory for examination. If any chipmunks and/or golden mantled squirrels or other wild rodents have been trapped in the same general area in which an animal has been found to be plague-infected, the entire consignment shall be destroyed."

Press Clippings.—Some news items from the lay press, on matters related to medical practice, follow:

Dr. Frank F. Barham Heads University of Southern California Alumni

Dr. Frank F. Barham, publisher of *The Evening Herald and Express*, today had been chosen president of University of Southern California's mighty Alumni Association.

Doctor Barham was declared elected and was installed at the annual meeting of the board of directors last night. He will serve during the academic year of 1938-39, succeeding Dr. Carl Howson, who was president during the past year.

Doctor Barham, long active in affairs of the General Alumni Association at University of Southern California, won distinction in 1936 when he served as chairman of the committee conducting Homecoming Week. Last year Doctor Barham held the office of president-elect.

The new alumni president is a graduate of University of Southern California School of Medicine and was a member of the class of 1906.

In his new position Doctor Barham will lead the activities of fifty thousand University of Southern California alumni members scattered throughout the world. There are Trojan alumni clubs in Paris, Hawaii, New York, Manila and the Orient, and in almost every city of any size in the United States.—*Los Angeles Evening Herald*, June 30.

Tuberculosis Doctors Elect Livermore Physician President

Los Angeles, June 22.—(AP)—Dr. Chesley Bush of Livermore today was elected president of the National Tuberculosis Association, succeeding Dr. J. Arthur Myers of Minneapolis.

Dr. Frederick T. Lord of Boston and Dr. Paul P. McCain of Sanatorium, North Carolina, were named vice-presidents. Honorary vice-presidencies went to President Roosevelt and Dr. Henry D. Chadwick of Boston. . . .

The convention heard Dr. W. P. Shepard, of the Metropolitan Life Insurance Company, San Francisco, urge tuberculosis examination as a part of every school program.

"No proper school health or public health program can afford to overlook tuberculosis," Doctor Shepard said. He placed the average cost of a general health program at \$1.70 per pupil per year, and said tuberculin testing, x-ray, and follow-up of positive reactors would increase that figure to about \$2.30.—*San Francisco Examiner*, June 23.

Chief Surgeon Walter B. Coffey Retires; Is Succeeded by Dr. Calvin A. Walker as Hospital Department Head

More than forty-two years' association with Southern Pacific's Hospital Department, the last twelve years as chief surgeon and manager, came to a close for Dr. W. B. Coffey on July 1 when he retired under the company's pension system to be succeeded by Dr. Calvin A. Walker.

Holding high rank in Pacific Coast medical circles and internationally known for contributions he has made to the advancement of his profession, Doctor Coffey was honored with a banquet at the Fairmont Hotel in San Francisco on June 27 attended by 180 medical associates and railroad officers, when the retiring chief lauded the fine support received for so many years from members of his staff.

Southern Pacific was the nation's first railroad to establish, in 1867, a hospital department for the exclusive use of its employees. Down through the years the services of the department and excellency of its facilities have been expanded and improved under the direction of a succession of distinguished chief surgeons that included Drs. A. B. Nixon, T. W. Huntington, Mathew Gardner, F. K. Ainsworth, and the now retiring W. B. Coffey.

In recent years the Hospital Department has been favored with very generous financial gifts from Edward S. Harkness, one of Southern Pacific's directors, which funds Chief Surgeon Coffey has used in equipping the General Hospital at San Francisco and the Tuberculosis Sanatorium at Tucson with facilities for research, treatment, and surgery that establish those institutions as the finest maintained for employees by any industrial organization in the country, perhaps in the world.

Doctor Coffey has been a staunch advocate of the periodic "check up" for officers and employees so that all ailments may be detected and treated before they cause serious damage to health.

The retiring chief surgeon graduated from Cooper Medical College, now Stanford University Medical School, in 1889, since which time he has practiced continuously in San Francisco. He became district surgeon for Southern Pacific in January, 1896; was appointed division surgeon in October, 1905, and assistant chief surgeon in August, 1923, succeeding Chief Surgeon Ainsworth on his retirement in August, 1926. He was a founder of the St. Francis Hospital in San Francisco in 1905, and is now president of that organization. Prior to taking over the duties of chief surgeon for Southern

Pacific. Doctor Coffey held the same position with the Market Street Railway. He was one of the organizers and was first president of the Pacific Association of Railway Surgeons.

Doctor Coffey will continue his active practice and research work in San Francisco.

Doctor Walker has been actively connected with the General Hospital in San Francisco almost continuously since graduating from Cooper Medical College in 1905. He was in Europe for several months during that year taking postgraduate work in various cities, and returned in July to become an intern in the railroad's general hospital. Following the earthquake and fire of 1906 he was transferred with patients to Sacramento where he became assistant surgeon in July, 1906. In November of that year he returned to San Francisco as emergency surgeon for the district south of Market Street, and in January, 1910, was appointed district surgeon in that city. For four years prior to joining the United States Army Medical Corps in April, 1918, he had been a visiting surgeon for the company in San Francisco. At the time the armistice was signed he was ready to sail for France as commander of Field Hospital No. 234. Returning to Southern Pacific in May, 1919, he resumed the duties of visiting surgeon; was appointed Coast Division surgeon in February, 1927, and has been supervisor of surgical services at the General Hospital since May, 1936.

For several years Doctor Walker has been a member of the medical staff of the Market Street Railway, also handling the industrial surgical work of the California Street Cable Railway, and is a director of the St. Francis Hospital. —*Southern Pacific Bulletin*, July, 1938.

* * *

FERA, New Deal Agency, Dead*

Congressional Lease of Life Ends for Once Big Spender

Washington, June 30.—(AP)—A bookkeeper drew a double red line in a ledger in the WPA office here today, and the Federal Emergency Relief Administration, one of the oldest and richest agencies of the New Deal, gave up the ghost.

Its cash register once sang to the tune of \$1,000,000,000 per annum. But when its Congressional lease on life ran out at the end of the fiscal year today its assets amounted to only \$250,000. This automatically goes to the Treasury to pay any claims on the FERA estate.

FERA was born on May 22, 1933, when a young social worker from New York, Harry Hopkins, came to Washington and was made administrator of the new agency, which was to distribute Federal funds to the states, chiefly for direct relief.

Young Hopkins took over an office in the crowded RFC Building, sat down and started the career of FERA.—*San Francisco Examiner*, June 31.

* * *

July 4 Death Toll Reaches 476 in Nation

Twenty-two Fatalities in California

America's three-day Independence celebration by last night had taken a toll of 476 lives—eight of them in northern California—with scores of others so critically injured that a final count this morning may bring the total close to last year's record of 563 deaths.

There were twenty-two deaths throughout California.

A national survey of the casualties by the Associated Press chalked up 245 auto traffic deaths, 126 more in drownings, twelve killed by trains, twenty-three dead in shootings, nineteen suicides, only three from fireworks, and forty-seven from various other causes.—*San Francisco Examiner*, July 5, 1938.

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Doctors Study Venereal Diseases

State to Pay Students During Course

Twelve young physicians today started the first post-graduate training course in venereal disease control at the University of California, Dr. Malcolm H. Merrill, chief of the state's Bureau of Venereal Diseases, said.

Under a \$12,000 grant from the State Department of Health, they will be paid during the three months they attend classes and during the next nine months of field clinics.

They will then be employed by the Bureau of Venereal Diseases in clinics throughout the state.

Those taking the course include:

Drs. Katherine H. MacEachern, E. Glenn Wood, and William F. Conrad, Los Angeles; Edward Hirschberg and Carl P. Jensen, Fresno; James W. Moreland, San Bernardino; H. C. Pulley and Helen Mackler, San Francisco; W. L. Turner and Russell Frantz, Santa Barbara; Philip K. Condit, Oakland; and Chester M. Weseman, Sacramento.—*San Francisco News*, July 5, 1938.

* FERA was the agency that allocated Federal funds for the "California Medical Economic Survey."

Old Age Pensioners in California

Sacramento, July 5.—(AP)—Cost of old age assistance continues to mount, statistics of the State Department of Social Welfare indicate.

The total for May of this year was \$3,748,021, compared with \$3,606,284 for April. A year ago the May total was only \$2,379,678.

There are 116,040 individuals receiving old age assistance. The average payment per person is \$32.53.

Just before the old age law was liberalized, it was tentatively estimated that the normal increase which could be expected due to greater numbers of persons attaining the requisite age would be 20 per cent a year.

Lowering of the age limits and the years of residence have accounted for the greater part of the big increase in the total number receiving financial assistance since the pension was established.

47,092 on Roll at Los Angeles

As recently as June, 1935, there were only 21,310 persons in the entire state drawing old age pensions. Los Angeles County alone now has 47,092 on its rolls.

The ten counties with the next largest number receiving old age aid are:

San Francisco, 8,285; Alameda, 6,981; San Diego, 5,709; San Bernardino, 3,973; Santa Clara, 3,094; Fresno, 2,760; Sacramento, 2,917; Riverside, 2,695; Orange, 2,483; and San Joaquin, 2,161.

All of the other counties have fewer than two thousand on their lists.

Sparingly settled Alpine County has only eleven old age pensioners; Mono has only sixty-two. The latter's average payment at \$35 a person, is the highest for the state.

Those having between 1,000 and 2,000 are: Humboldt, 1,218; Butte, 1,434; Kern, 1,400; Santa Barbara, 1,058; Santa Cruz, 1,175; Sonoma, 1,812; Stanislaus, 1,233, and Tulare, 1,689.

Alameda's cash disbursements average is the lowest for the state at \$30.72.

Each successive California Legislature has increased the benefits payable to the aged.

The state's Old Age Security Act of 1929 provided a minimum age of seventy at which the elderly could draw pensions. This was cut to sixty-five years in 1935. Pensions then were \$20 to \$35 monthly. The 1937 Legislature left the age limit at sixty-five, but reduced the required residence from fifteen to five years, adding in excess of fifty thousand to the eligible list.—*San Francisco Call-Bulletin*, July 5, 1938.

Free Syphilis Tests

All City Emergency Hospitals Again Open to Public

The regular Wednesday Wassermann tests for syphilis at all San Francisco's emergency hospitals will be given again tomorrow from 10 a. m. to 10 p. m., Dr. J. C. Geiger, city health officer, announced today.

Doctor Geiger reminded San Franciscans that these tests are free and confidential and are offered the public weekly, both for the benefit of individuals and also to determine the prevalence of syphilis in San Francisco.—*San Francisco News*, July 5, 1938.

Supervisors Told How to Save Million Dollars

Council Rules Persons on Relief Can Be Sent to Other States If Kin Can Support Them

Estimated to give an annual saving within the county of about a million dollars if it can be made effective, legal opinion yesterday was given the Board of Supervisors that approximately sixteen hundred persons on relief rolls here can be sent back to other states if relatives there can support them.

Deputy County Counsel Claude McFadden, who submitted the ruling, ruled on the case of a woman who refused to return to the Oregon home of a brother, who was willing to support her. She is on relief here.

The ruling affects so-called technical nonresidents of the state under the state law which requires that persons coming here from other areas must be self-maintaining for at least three full years before applying for relief, if they are to perfect their California legal residence.

Executives of the county's department of charities have denied aid to many of these persons, forcing them on the rolls of private relief agencies, but no direct ruling was made until yesterday that county funds cannot be legally used in aiding these indigents, even if they have lived here for many years but have not been self-supporting for any three years of a period.—*Los Angeles Examiner*, July 6, 1938.

Population in 1988 Mostly Middle-Aged

Washington, July 5.—(AP)—President Roosevelt made public tonight a report predicting that the American population, after attaining a peak of 158,000,000 by 1988, would

dwindle thereafter and would consist largely of old, or middle-aged people.

The prediction was made by the committee on population problems and was transmitted to the White House by the President's national resources committee.

The experts estimated that between 1935 and 1975, the number of persons twenty to forty-four years of age would increase only 6 per cent, whereas the number forty-five to sixty-four years old would increase 69 per cent.

Peak May Be 138,000,000

Persons over sixty-five, now comprising about 6 per cent of the population, will constitute 15 per cent of it in 1980. People under twenty, now about 37 per cent of the population, will be only about 25 per cent in 1980.

All this, the committee suggested, might be circumvented by relaxation of present bars to immigration and by a reversal of the diminishing birth rate, but in the long run a halt in the population increase might not be such a bad thing after all.

While the committee leaned toward a population estimate of 158,000,000 by 1988 it said there was a possibility that the peak might actually be 138,000,000 and that it might be reached as early as 1955.

Indians Increasing

Discussing births, the survey said white and Negro groups now are reproducing at about the same rates, while the American Indians are the most rapidly increasing racial stock in the country.

The report declared that the members of the committee, which included prominent students of population, eugenics, genetics, and sociology, were not advocating a general reduction in the size of families.

Instead, they favored lifting the burden of carrying individuals and families unable to support themselves off the back of individuals and families now paying the bills.

Then, the report added, the latter families would be able to raise more children, thus changing the present situation in which families on relief average many more children than the nonrelief groups.—*Los Angeles Examiner*, July 6, 1938.

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British Doctor Freed by Jury

London, July 19.—(INS)—Eminent doctors today applauded a jury's verdict freeing Dr. Aleck William Bourne, one of England's most noted gynecologists, of criminal charges because he spared a fifteen-year-old assault victim motherhood.

Doctor Bourne admitted performing an illegal operation upon the girl, victim of assault by a group of soldiers, and invited prosecution on behalf of the gynecologists of the nation.—*San Francisco Examiner*, July 20.

* * *

Social Disease Work Outlined

Part of Federal Fund To Be Used to Help Those Unable to Pay

Washington, July 14.—(AP)—Government physicians today said that the major part of a new \$3,000,000 fund for control of venereal diseases will be devoted to treatment of persons who cannot pay for private care.

Members of the public health service's venereal diseases division said funds will be distributed to every state for use in buying medicines, establishing or aiding clinics, financing educational work or paying salaries of persons engaged in control activities.

For these purposes, \$2,400,000 will be divided among the states, in the present fiscal year, on a basis of population, financial needs and the extent of venereal disease.

The federal service is retaining \$600,000 for the development of prevention, treatment and control methods.—*Los Angeles Times*, July 18.

* * *

British Doctors Threaten Strike

London, July 7.—(AP)—British doctors threatened a possible "stay-in strike" today to prevent admission of additional Austrian physicians to practice in this country.

Dr. A. Welby, general secretary of the Medical Practitioners Union, said if representations to members of the House of Commons failed "much more drastic action will be taken—something will be done to arouse the whole country; it may possibly develop into what is known as a stay-in strike."

Welby asserted foreign doctors were not required to study as long as qualified British physicians.—*San Francisco Chronicle*, July 8, 1938.

* * *

U. S. to Survey California Welfare Outgo

A study by Washington authorities of how California is spending \$24,000,000 a year in federal funds on social welfare will begin shortly, it was disclosed here yesterday.

Miss Jane Hoey, director of the Social Security Board's bureau of public administration, is already in the state making final arrangements for the study. Eight experts will arrive from the East later this month to begin operations.

The woman director said the study had been requested by the State Social Welfare Board with the assent of Director Mrs. Florence Turner and Governor Merriam.

The study will concentrate in the metropolitan areas of San Francisco, Los Angeles and Alameda counties. A typical San Joaquin Valley county, however, also will be studied.

Relief workers in San Francisco will be checked to determine if they are functioning properly under the laws by which the Federal Government matches state funds.—*San Francisco Chronicle*, July 8, 1938.

* * *

Letterman Hospital Addition Assured

Unofficial but authoritative advices that PWA construction of three new wings for Letterman General Hospital has been approved were received here yesterday by Representative Franck Havener.

The additions, Havener said, will replace the old wooden wards which line the front of the hospital and have been branded as fire menaces.

One new ward, Havener said, will be for officers, one for women, and the third for enlisted men.—*San Francisco Chronicle*, July 8, 1938.

* * *

Migrant Vote May Decide State Election

Majority of 221,000 Workers Eligible to Ballot*†

California's elections may be decided by the votes of migrant farm workers from the Midwest drought area and other states where agriculture and employment have been adversely affected by the Roosevelt recession.

With a large field of candidates for governor, lieutenant-governor and other state offices, as well as for the Legislature, minority nominees at the August primary election may land on top of the heap at the November general election by the votes of the newcomers, many of whom are recipients of government relief.

221,000 in State

According to the U. S. Farm Placement Bureau, more than 221,000 of these farm workers have entered California in the past thirty months. A large proportion of them have been here long enough to establish a voting residence. . . .

Balance of Power

"The drive," states Archie Clossen, a Lodi farmer and a former American Legion commander, who is campaigning in the valleys for the Merriam forces, "has as its objective to bring about the defeat of the governor in the belief that the refugees, if they vote as a block, hold the balance of power in the coming elections.

"When we consider that state registrations this year are estimated at more than 3,200,000, it readily will be seen that such calculation is within the realm of possibility. The propaganda, of course, follows the familiar Communist formula of playing on the psychology of distressed and disheartened people."

"The situation," Clossen declared, "would be more disturbing were it not for the character of the refugees themselves. Reports from the interior indicate that a large proportion, if not a majority, are earnest, industrious workers, anxious and willing to work. It is their misfortune and California's problem that they were led to come here, seeking work, at a time when there is not enough work to go around."—*San Francisco Chronicle*, July 26.

LETTERS

Concerning an American Museum of Health, Incorporated.

New York, June 11, 1938.

To the Editor:—One of the outstanding exhibits at the New York World's Fair, 1939, Incorporated, will be that of the \$400,000 Medical and Public Health Building, already erected on the Main Esplanade and adjacent to the Trylon and Perisphere—the Fair's Theme Center. Here will be displayed in one coördinated, carefully planned set of units numerous exhibits of unparalleled importance to the welfare of mankind.

At the conclusion of the Fair, it is expected that many of the exhibits displayed in the Medical and Public Health

* By Earl C. Behrens.

† For other comment, see page 155.

Building will be removed to a permanent Museum of Health to constitute the nucleus of an influential institution for health education in New York City.

Yours very truly,

EDMUND LEAMY,
Assistant to Secretary.

30 Rockefeller Plaza.

Concerning use of paper milk containers in dairy plants.

(COPY)

June 27, 1938.

Dr. C. U. Duckworth, Assistant Director,
State Department of Agriculture,
Sacramento, California.

Dear Doctor:

I am in receipt of a communication from Mr. O. A. Ghigoile, Supervisor of Dairy Service, Division of Animal Industry, in which he advises me that the use of paper milk containers in dairy plants distributing milk and cream to the retail trade is contrary to the provisions of Section 479, Paragraph B, of the State Agricultural Code, which section and paragraph require that bottles used in the distribution of milk and cream to the retail trade be washed and sterilized before re-use.

I have carefully reviewed the terms of this section and paragraph and find the context obviously refers to the cleansing and sterilizing of glass containers. Glass containers being frequently refilled must be thoroughly cleansed and sterilized before re-use. This procedure is unnecessary in the case of paper milk containers, which are designed primarily for single use and are delivered at the dairy plant in practically sterile condition. Apparently when this section of the Agricultural Code was drafted no thought was given to the possibility of paper milk containers being used for the retail distribution of milk and cream. Nowhere in the Agricultural Code is any specific mention made of paper milk containers. I am of the opinion that the development of the paper milk containers has reached the stage where health authorities can raise no valid objection to its use in the distribution of milk, cream and milk food products to the retail trade. This statement is based on the fact that many investigators throughout the nation have conducted studies on this subject and have reached the conclusion that in its final form the paper milk container is practically sterile and therefore a suitable medium for the delivery of milk and cream to the retail trade.

Probably the most comprehensive investigation initiated for the purpose of ascertaining the sterility of the paper milk container was that sponsored by the University of Illinois. The findings submitted as a result of this investigation demonstrated the practical sterility of the paper milk containers. This department has had occasion to examine bacteriologically two types of paper milk containers, namely, the finished container delivered at the dairy plant and the finished container which is formed, paraffined, filled and sealed within an automatic machine. I am enclosing for your information reports of the laboratory upon these examinations. These tests have confirmed the belief that to all intents and purposes the paper milk container is sterile. I believe that under the State Agricultural Code the Director of Agriculture has the power to approve the use of paper milk containers provided that after proper investigation and study he is convinced that the use of such container would not be prejudicial to public health nor affect in any way the quality and wholesomeness of the milk.

Up to the present moment the milk distributors of San Francisco have manifested no desire to replace the present glass containers with paper receptacles. One milk distributing concern, however, made inquiry as to the attitude of the department on the use of paper milk containers and as a result of the inquiry submitted to the laboratory for bacteriological examination specimens of the particular type of container he was interested in. This container is formed, paraffined and filled within the machine. Apparently the negotiations have fallen flat, as I have received no further information on the matter.

The order issued by Mr. Ghigoile prohibiting the use of paper milk containers cannot apply to the milk plant oper-

ators in this city due to the fact that paper milk containers are not now in use. In conclusion, I would recommend that further study and investigation be given to this subject before enforcing the terms of the order.

A copy of this letter is being sent to the American Can Company, as we have discussed the question of the use of paper milk containers with them.

Sincerely,

J. C. GEIGER, M.D.,
Director of Public Health.

MEDICAL JURISPRUDENCE †

By HARTLEY F. PEART, ESQ.
San Francisco

Release of One Joint Tort-Feasor as Release of All: Effect of Dismissal by Plaintiff as to One of Several Defendants in a Malpractice Action

An action against a physician and surgeon for alleged "malpractice" is under legal terminology termed a "tort" action. The defendant is called a "tort-feasor." Actions at law based upon the alleged breach of a promise, whether oral or written, express or implied from conduct, are called "contract" actions. Actions at law based upon an alleged negligent or willful act causing injury to person or property are all classified as "tort" cases and "malpractice" suits fall within this classification.

Now, let us assume that an action alleging malpractice is commenced against Doctor A, a surgeon, against Doctor B, a general practitioner who treated the plaintiff prior to the performance of a surgical operation by Doctor A, against C, a hospital, and against D, a nurse who attended during the operation on the plaintiff. Then let us suppose that plaintiff a few days before the trial accepts an offer of settlement from the C hospital and thereupon dismisses the action as to the hospital. Can the plaintiff then proceed and secure a judgment against the two physicians and the nurse? It is a rule of the common law (which has been adopted in this state in the Civil Code) that the release of one of two or more joint obligations under a *contract* does not release the others, but that a release of one of two or more joint *tort-feasors* acts as a release of all. One reason for this rule is that by accepting a settlement from one of two or more joint tort-feasors an injured person thereby announces that he has received satisfaction for the injury complained of. Another reason is that it would be unjust that the injured party be allowed double payment for the single injury. A third reason often advanced is that the injuries sustained as the result of joint acts by several persons are inseparable and give but a single cause of action, the satisfaction of which by any one of the joint tort-feasors extinguishes the single cause of action as to all of them. There have been several California cases which illustrate the foregoing rule. In

Manson vs. Casey

19 Cal. App. 400

the facts were as follows: Plaintiff tripped on a defective sidewalk and was injured. She commenced an action for damages against members of the San Francisco Board of Public Works and eventually accepted the sum of \$250 in settlement of her claim against one of the members of the board. The settlement document released the member paying the \$250 and stated that it was not the intention of the plaintiff that it should operate as a release of the liability of the other defendants. The court held that a plaintiff could not settle with one of several joint tort-feasors without automatically releasing all of the others. The court further stated that it was impossible for a plaintiff to preserve a right of action against those defendants with whom a settlement was not reached.

† Editor's Note.—This department of CALIFORNIA AND WESTERN MEDICINE presenting copy submitted by Hartley F. Peart, Esq., will contain excerpts from and syllabi of recent decisions and analyses of legal points and procedures of interest to the profession.

In the case of

Lewis vs. Johnson
93 Cal. App. Dec. 638

the facts were as follows: Plaintiff commenced an action against two physicians, a hospital and a nurse for damages for alleged malpractice. During the trial the plaintiff settled with the hospital and the nurse and then attempted to proceed as against the two physicians. The court held, however, that the plaintiff had by releasing the hospital and the nurse thereby automatically released all of the defendants. Accordingly, judgment in favor of the defendant physicians was ordered. In this case, as in the *Manson* case, the plaintiff, after releasing one defendant, had endeavored to reserve a cause of action against the remaining defendants. But the Court held with respect to this attempted reservation as follows:

The attempted reservation of a cause of action against the remaining defendants was ineffective and void. It is settled that a retraxit as to one joint tort-feasor releases all of the joint tort-feasors, irrespective of an attempted reservation of the cause of action against some of the tort-feasors and regardless of the intentions of the parties.

Hence, it should be borne in mind that in every action for malpractice against two or more defendants based upon one alleged injurious act or omission in which all of the defendants assertedly participated, a release by the plaintiff as to one of the defendants acts as a release with respect to all.

SPECIAL ARTICLES

CALIFORNIA SOCIETY FOR THE PROMOTION OF MEDICAL RESEARCH*

Action taken at the recent convention of the American Medical Association and meetings of various allied medical organizations in San Francisco and Del Monte brought to seventy-nine the formal endorsements of the campaign to defeat California's proposed "State Humane Pound Act," which is to appear on the ballot at the general election in November.

This is the announcement of the California Society for the Promotion of Medical Research (369 Pine Street, San Francisco), conducting a program of education against the measure, which it brands as mistitled antivivisection legislation. The society, headed by President Ray Lyman Wilbur of Stanford University, has on its committee every university president in the state, besides eminent churchmen, physicians, dentists, scientists and lay men and women to the number of more than a thousand.

"It is not medical societies alone which have gone on record in opposition to this proposed measure, though they, of course, know best the dangers that would result from enactment of such a law," says a statement issued by James Leo Halley, chairman of Public Education Week in San Francisco. "Organizations of many kinds have united in calling attention to the grave injury to public health work which such a law would entail."

Opposition to the initiative has been officially recorded by such groups as the San Francisco Chamber of Commerce, the San Joaquin Kennel Club, the National Board of Trustees of the Shriners Hospitals for Crippled Children, as well as the American, Western, California and Catholic hospital associations; Canners League of California, California State Dental Association, and the American Association for the Advancement of Science, the latter with 250,000 affiliated members.

* * *

List of organizations endorsing campaign against the proposed "State Humane Pound Act" in California:

Academy of Science of St. Louis
American Academy of Orthopedic Surgeons
American Academy of Pediatrics
American Association for the Advancement of Science (membership, 18,000; affiliated membership, 250,000)
American Association of Anatomists
American Association of Dental Schools
American Association of Medical Milk Commissions

* For other comment, see page 109.

American Board of Otolaryngology
American Board of Radiology
American Board of Urology
American Clinical and Climatological Association
American College of Chest Physicians
American College of Physicians
American College of Surgeons
American Dermatological Association
American Drug Manufacturers' Association
American Foundation for Tropical Medicine
American Hospital Association
American Medical Association
American Medical Women's Association
American Neurological Association
American Ophthalmological Society
American Pediatric Society
American Physiological Society
American Radium Society
American Rheumatism Association
American Society of Biological Chemists
American Society of Clinical Pathologists
American Society of Ichthyologists and Herpetologists
American Society of Zoologists
American Student Health Association
Association of American Medical Colleges
Association of California Hospitals
Association for Research in Ophthalmology
Association for the study of Internal Secretions
Association of Western Hospitals
California Academy of Medicine
California Academy of Sciences
California Association of Clinical Laboratories
California Heart Association
California Medical Association
California Pharmaceutical Association
California State Association of Chiropodists
California State Dental Association
California State Organization for Public Health Nursing
Canners League of California
Catholic Hospital Association of United States and Canada
Central Society for Clinical Research
Congress of American Physicians and Surgeons
Ecological Society of America
Federation of American Societies for Experimental Biology
Genetics Society of America
Hewlett Club, San Francisco
International Association for Dental Research
Kentucky Academy of Science
National Board of Medical Examiners
Northern California Retail Druggists' Association
Ohio Academy of Science
Pacific Coast Surgical Association
Pacific Roentgen Club
Pasteur Society of Central California
Pennsylvania Society for the Protection of Scientific Research
Public Health League of California
San Francisco Center of the California League of Women
Voters
San Francisco Chamber of Commerce
San Francisco County Medical Society, Women's Auxiliary
San Francisco Pathological Society
Shriners Hospital for Crippled Children, National Board of
Trustees
San Joaquin Kennel Club
Society of American Bacteriologists
Society for Experimental Biology and Medicine
Southern California Public Health Association
Southern California State Dental Association
Virginia Academy of Science
Western Society of Naturalists
Whittier District Medical Society

NEW FEDERAL FOOD, DRUG AND COSMETIC ACT

The new Federal Food, Drug and Cosmetic Act became law in June, 1938, when it was signed by President Roosevelt. Its general provisions will become effective one year from June. Certain provisions become effective immediately.

The new law, in its principal differences from the Federal Food and Drugs Act of June 30, 1906:

1. Brings all cosmetics except toilet soaps under control; outlaws cosmetics which may be injurious to health, except poisonous coal tar hair dyes which bear warning labels; prohibits false or misleading labeling.
2. Prohibits traffic in food which is injurious to health. (The old law prohibits injurious food only when the poisonous substance is added.)

3. Prohibits the addition of poison to food except where such addition is necessary or cannot be avoided in production; where added poisons are necessary or cannot be avoided, tolerances are authorized limiting the amount to a point of safety.
4. Authorizes emergency permit control of food that may be injurious because of contamination with micro-organisms, if public health cannot otherwise be protected.
5. Forbids traffic in confectionery containing metallic trinkets and other inedible substances.
6. Specifically requires label declaration of artificial coloring, artificial flavoring and chemical preservatives in food, but exempts butter, cheese and ice cream from this requirement in so far as artificial coloring is concerned.
7. Requires labeling of special dietary food to inform purchasers fully of its vitamin, mineral and other dietary properties.
8. Provides for the promulgation of a definition and standard of identity and a reasonable standard of quality and fill of container for each food, but exempts from this provision fresh and dried fruits and vegetables except avocados, cantaloupes, citrus fruits and melons. Butter is also exempt from this provision, but the Act preserves the statutory definition and standard of identity for butter which became law in 1923. (The old law contains no authority for the establishment of definitions and standards of identity, and the authority to establish standards of quality and fill of container is limited to canned foods.)
9. Requires the labeling of food for which no definition and standard of identity has been fixed to disclose the ingredients by name, except colorings and flavorings, which may be declared simply as coloring and flavoring. Authorizes regulations prescribing exemptions from this requirement where compliance is impracticable or results in deception or unfair competition.
10. Does not contain the "distinctive name" joker of the old law under which any food not injurious to health can escape control.
11. Brings under control drugs used in the diagnosis of disease and drugs intended to affect the structure or any function of the body.
12. Brings therapeutic devices under control, and subjects them to the same general requirements as are set up for drugs.
13. Prohibits traffic in drugs and devices which are dangerous to health under the conditions of use prescribed in the labeling.
14. Prohibits traffic in new drugs unless such drugs have been adequately tested to show that they are safe for use under the conditions of use prescribed in their labeling; authorizes exemption from this requirement of drugs intended solely for investigational use by qualified scientific experts.
15. Makes the Homeopathic Pharmacopeia of the United States the legal standard for homeopathic drugs.
16. Requires labels of official drugs—i. e., drugs recognized in the U. S. Pharmacopeia, National Formulary or Homeopathic Pharmacopeia of the United States—to reveal any differences of strength, quality or purity from the official standards. (The old law requires merely that the label bear a true statement of the strength, quality and purity of the drug, without showing the difference from the official standard.)
17. Requires drugs intended for use by man to bear labels warning against habit formation if they contain any of a list of narcotic or hypnotic habit-forming substances, or any derivative of any such substance which possesses the same properties.
18. Requires the labeling of drugs and devices to bear adequate directions for use, but authorizes regulations exempting drugs and devices from this requirement where it is not necessary for the protection of the public health.
19. Requires the labeling of drugs and devices to bear warnings against probable misuse which may be dangerous to health.
20. Requires special precautionary labeling for drugs that are liable to deterioration.
21. Does not contain the fraud joker in the old law under which the Government must prove that false claims of curative effect on the labels of patent medicines were made with willful intent to deceive.
22. Requires official drugs to be packaged and labeled as prescribed by the Pharmacopeias and Formulary.
23. Defines nonofficial drugs as illegal if the standard of strength differs from the standard claimed. (The old law prohibits only those which fall below the strength claimed.)
24. Requires that antiseptics possess germicidal power.
25. Requires the labels of nonofficial drugs to list the names of the active ingredients, and in addition to show the quantity or proportion of certain specified substances. Authorizes regulations prescribing exemptions from this requirement when compliance is impracticable.
26. Proscribes the use of containers for food, drugs and cosmetics which may render the contents injurious to health.
27. Prohibits traffic in food, drugs and cosmetics which have been prepared or handled under insanitary conditions that may contaminate them with filth or that may render them injurious to health.
28. Forbids the use of uncertified coal tar colors in food, drugs and cosmetics other than hair dyes.
29. Proscribes slack filling of containers for food, drugs and cosmetics, and outlaws the use of deceptive containers.
30. Authorizes factory inspection of establishments producing food, drugs, devices and cosmetics for interstate shipment.
31. Provides for the procurement of transportation records and other documents necessary to establish federal jurisdiction.
32. Requires that part of samples collected by the Government for analysis be given to the manufacturer on request, but provides exemption from this requirement to the extent necessary for proper administration of the Act.
33. Authorizes the Government to charge fees for the certification of coal tar colors in amounts necessary to defray the expenses of the service.
34. Specifically authorizes settlement of minor violations through written notice or warning from the enforcing agency when the public interest can thus be adequately served.
35. Provides increased criminal penalties for violations.
36. Authorizes the federal courts to restrain violations by injunction.
37. Limits seizure for misbranding to a single interstate shipment of the product unless the misbranding has been the subject of a prior court decision in favor of the Government, or unless the misbranded article is dangerous to health, or its labeling is fraudulent or would be in a material respect misleading to the injury or damage of the purchaser or consumer. Authorizes consolidation of multiple seizure cases (seizures of two or more interstate shipments of identical goods from the same shipper) for trial in a single jurisdiction. Also authorizes such consolidated cases, as well as cases involving seizure of a single interstate shipment for misbranding, to be removed for trial to any district agreed upon by stipulation between the Government and the shipper or owner of the seized goods. In case of failure to reach such an agreement, the shipper or owner of the goods may apply to the court in which the seizure was made, and the court is required, unless good cause to the contrary is shown, to specify a district of reasonable proximity to the applicant's principal place of business in which the case will be tried. (The old law places no limitation on the number of shipments of illegal goods which may be seized; contains no provision for change of venue for trial. Seizure cases are tried in the district in which seizure occurs, which ordinarily is the district to which the goods have been shipped for sale and consumption.)
38. Provides for a judicial review in the United States Circuit Court of Appeals to determine the validity of certain regulations. This form of review is an addition to and not in substitution for established forms of review through equity proceedings and proceedings under the Declaratory Judgment Act.

Immediately upon approval of the Act by the President the following provisions became effective:

The prohibition against drugs which are dangerous to health when used in the dosage, or with the frequency or duration prescribed, recommended or suggested in the labeling.

The prohibition against the introduction of new drugs before an application for such introduction becomes effective.

The prohibition against cosmetics which may be injurious to users under the conditions of use prescribed in the labeling or under such conditions as are customary or usual. However, poisonous coal tar hair dyes which would be exempted under the proviso of this requirement if they bore the warning label prescribed by the statute will not be subject to action by reason of their failure to hear the prescribed warning until ninety days after the date of approval.

SOCIALIZED MEDICINE: A RECENT POLL

On the basis of reply blanks received it would appear that approximately 66 per cent of the doctors of California are opposed to a reorganization of medical practice in the direction of socialized medicine, as revealed in the final results of a physician's referendum on socialized medicine conducted by *Modern Medicine*. A total of 16,711 ballots were cast by doctors throughout the nation, giving the greatest direct expression of medical opinion ever recorded on any topic whatsoever, and indicating that the trend of medical thought—except for New York City—is definitely away from socialized medicine, the editors announce.

On the question as to whether public funds should be used to pay the cost of medical care for the indigent and low income group, 54 per cent of California doctors replying voted in favor. However, 83 per cent of those who replied voted support of the present policies of the American Medical Association in studying all plans of making a high standard of medical care available to all people under the control of each community.

Of the specialists in California, 61 per cent of those who replied voted against reorganization, but of the general practitioners, about 68 per cent. Among replying doctors in metropolitan centers in California (cities over 50,000), 63 per cent voted against reorganization. Of the specialists, 58 per cent who answered the questionnaires favored the use of public funds to pay for medical care, while of the general practitioners, about 50 per cent.

The final results obtained in the publication's referendum on socialized medicine are at great variance with the recently published "Gallup poll," which, under the sponsorship of the American Institute of Public Opinion, reported that seven out of ten doctors favored the principle of health insurance. According to the *Modern Medicine* referendum, in which 16,711 doctors' votes gave a cross-section of medical opinion throughout the whole United States, active practicing doctors in the United States definitely oppose the reorganization of medical practice by a vote of two to one.

They reported that they knew of very few cases, not more than one in ten, where individuals or families, claiming inability to pay, were not getting whatever medical care a physician himself can provide. They showed a slight preference (55 per cent) for the use of public funds to pay for medical care for the indigent and low income groups. They strongly approved the present policy of the American Medical Association by a vote of 17 to 3.

This vote showed a definite trend of opinion among United States doctors away from socialized medicine. In 1935, in a similar survey conducted by *Modern Medicine*, 43 per cent of 6,044 doctors voted favoring a change in the administration of medical practice. In 1938, two out of three doctors among the 16,711 voting opposed reorganization.

Among doctors who replied yes to the question on the physicians' referendum which read: "Do you know of any case in your community where an individual or family, claiming inability to pay, has been refused whatever medical care a physician could provide?" many amplified their answers to the effect that the so-called "claim" of inability to pay was false and that care was sometimes refused to individuals who spent their money on luxuries, vacations, transportation, liquor and gambling while owing bills and telling the doctor they could not pay anything at all for his services.

The greatest opposition to reorganization of medical practice was found among country doctors and general practitioners who had been in practice for more than fifteen years. In this poll, reorganization of medical practice found most favor among general practitioners who were earning less than \$3,000 a year, and who were practicing in large cities.—*Modern Medicine*, July, 1938.

POPULATIONS OF LARGER AMERICAN CITIES: STRIKING AGE CONTRASTS

A relative preponderance of elderly people is characteristic of most of the principal cities of the Pacific Coast states. In fact, according to the last census, there are more cities of elders in the Pacific Coast states than in any other main geographic division of the country. Of all our ninety-three large cities, that is, those which had more than 100,000 population in 1930, there are eighteen in which more than 6 per cent of the population in that year was in the age range 65 and over; and seven of these cities are in the three Pacific Coast states, four of them being in California.

Long Beach, Calif., with 9.2 per cent of its population over 65 years of age, is, in this sense, the oldest of America's large cities, although it is closely followed by San Diego, in the same state, with 9.1 per cent. These two cities, in fact, stand out from all the rest, as the third city in order is Spokane, Wash., with only 7 per cent of its population over 65 years. Tacoma, Wash., and Denver, Colo., are bracketed for fourth rank with 6.9 per cent. In New England there are three cities with a large contingent of old people, namely, Lowell, Lynn, and Somerville—all in Massachusetts. Cincinnati and Grand Rapids are the only representatives of the East North Central region; in the Middle Atlantic states there are four, namely, Albany, Reading, Rochester, and Utica; and in the West North Central group only one, namely, St. Paul.

The existing age distribution, as must be well known to our readers, is the result of a gradual drift towards older ages that has been taking place for many decades, due mainly to the declining birth rate, with consequent lessening in proportion of young people in the population. This is a general phenomenon observed in the population of this country at large, as well as abroad, and, with few exceptions, individual cities have shown a drift in the same direction. Which of the ninety-three large cities included in our table has registered the greatest increase in proportion of its older people, since the beginning of the present century, cannot be told, because ten of these cities were small places at the beginning of the century and we have no data regarding their age distribution at that time. However, of eighty-three cities for which it is possible to make comparison between 1900 and 1930, we find that Spokane leads in this respect, with an increase in the proportion of the population over age 65 from 1.9 per cent in 1900 to 7 per cent in 1930. In two other cities in the State of Washington—Tacoma and Seattle—the proportion of persons over 65 years of age practically tripled in thirty years, and the same is true of Duluth, Minn., which exhausts the list of cities showing a threefold or greater increase in the proportion of those 65 or more years old. Cities in which this proportion has doubled, or more than doubled, are Denver, Fall River, Kansas City (Kansas), Kansas City (Missouri), Minneapolis, Omaha, Portland (Oregon), and St. Paul.

There are only two large cities in the United States—Akron and Detroit—in which the proportion of persons 65 years and over has declined since 1900.

Gary, Indiana, is the country's youngest among all the cities of more than 100,000 population, with only 1.7 per cent of its inhabitants aged 65 years or over.

Special interest attaches to the five largest cities (those of more than 1,000,000 population). Detroit is by far the youngest, when measured by its proportion of old people—only 2.8 per cent. New York (3.8 per cent) is decidedly a young city, as is Chicago, with exactly 4 per cent. The Philadelphia population, with 5.1 per cent in the 65 and over group, is older, while Los Angeles, with 6.2 per cent, is the oldest among America's five largest cities.

Turning now from extremes to a consideration of what might be thought the most typical cities, namely, those at or around the middle of the list, in order of rank, we find five—Toledo, Salt Lake City, St. Louis, Paterson, and Kansas City (Kansas)—with the median of 5.2 per cent of persons 65 or more years old. It is interesting to observe that this comes very close to the general average for the United States population as a whole, that is, 5.4 per cent.

It will be noted that the cities with the highest contingents of old people are places distinguished by equable climate, and by the facilities for rest and recreation which these communities provide. Old people who have been able to retire and to live on private income, savings, retirement

funds, or annuities are wont to make such cities their permanent places of residence in their declining years. On the other hand, it is, for the most part, large industrial areas (like Gary, Birmingham, Detroit, Flint, and Akron, for example) which, in their rapid growth, and because of the opportunities that their industries offer, have attracted the young and vigorous in search of remunerative employment. —*Statistical Bulletin, Metropolitan Life Insurance Company.*

Per Cent of Population at Ages 65 and Over. In Certain Cities of the United States with a Total Population of 100,000 or More in 1930; Compared with Corresponding Percentages for the Same Cities in 1900, 1910 and 1920

City	Per Cent of Population at Ages 65 and Over			
	1930	1920	1910	1900
Long Beach, Calif.	9.2	10.9
San Diego, Calif.	9.1	9.2	7.8
Spokane, Wash.	7.0	4.6	2.6	1.9
Denver, Colo.	6.9	4.9	3.6	2.8
Portland, Ore.	6.6	4.7	3.2	2.5
Los Angeles, Calif.	6.2	6.2	4.8	4.4
Oakland, Calif.	6.1	5.2	4.9	5.0
Boston, Mass.	5.5	4.4	4.0	3.6
San Francisco, Calif.	5.4	4.3	3.8	4.0
Salt Lake City, Utah	5.2	4.0	3.3	3.8
St. Louis, Mo.	5.2	4.2	3.6	3.5
Philadelphia, Pa.	5.1	4.2	4.0	3.8
Miami, Fla.	4.5	3.4
New Orleans, La.	4.1	3.7	3.8	3.8
Chicago, Ill.	4.0	3.2	2.8	2.4
New York, N. Y.	3.8	3.1	2.8	2.8
Chattanooga, Tenn.	3.3	3.0	2.8	2.3

CARBON MONOXIDE HAZARDS IN TRAFFIC ACCIDENTS IN CALIFORNIA

The Industrial Hygiene Service of the California State Department of Public Health, Dr. John P. Russell, Chief, has issued a preliminary report covering the carbon monoxide hazard in relation to California highway traffic casualties. Doctor Russell was assisted in making the survey of such hazards by Sergeant George S. Zelk, Bureau of Commercial Equipment, California Highway Patrol, and Fred R. Ingram, Senior Engineer, Industrial Hygiene Service, California State Department of Public Health.

In 1937, out of 37,968 traffic accidents on California highways, 597 were attributed officially to "sleepiness" of the drivers of the vehicles involved. It is admitted that fatigue due to long hours of driving and insufficient rest contributes to sleepiness and the theory that the inhalation of engine exhaust gases is responsible in part at least for otherwise inexplicable accidents led to the making of the survey.

Determinations of carbon monoxide in drivers' compartments of motor vehicles were made in nine widely scattered areas of California. This work was conducted on ascending and descending grades, as well as on level highways, under varying weather conditions, including snow, rain and desert heat, at various hours of the day and night, in temperatures ranging from 21 degrees to 74 degrees Fahrenheit, and relative humidities ranging from 18 per cent to 97 per cent.

Most of the vehicles tested were trucks and busses, for the reason that they all fall into the industrial hygiene classification. At a later time, under other auspices, similar tests on passenger cars may be undertaken.

A total of 1,105 vehicles was tested in the survey, and in 2 per cent of the vehicles tested the carbon monoxide concentration was found to be 100 parts per million or higher. Such a concentration of carbon monoxide is sufficient, in some cases, to cause headache, sleepiness and impaired judgment, when inhaled over a period of six to eight hours. In vehicles where such high concentrations are found, potentially dangerous conditions exist, and it is essential that the source of the dangerously high concentration be discovered.

Generally, the defect was traced to one or more of the following defects in the exhaust system: loose exhaust pipe or manifold connection, blown-out exhaust gasket, cracked exhaust manifold, leaky muffler or faulty design of the exhaust system. Exhaust gases escaping from these defects may enter the driver's compartment in large quantities through openings in and around the cab without the driver being aware of their presence. Correction of defects in the exhaust system greatly reduces the amount of carbon monoxide to which the driver is exposed.

In an effort to correlate the effects of inhalation of engine exhaust gases with the ability to drive motor vehicles, five volunteers, including the writers, underwent a series of tests of their steering ability, perception and reaction time, eye-hand and eye-foot coördination, visual acuity, field of vision, depth perception, speed estimation, color vision and glare resistance, before and after the inhalation of known amounts of carbon monoxide during a four-day period.

These tests were made with the coöperation of the Division of Drivers' Licenses, State Department of Motor Vehicles, using instruments and apparatus assembled by them for measuring driving skill. The subjects were first given a series of tests on the instruments to reduce the learning or practice factor. Blood pressure and pulse readings were taken, and determinations of blood saturation with carbon monoxide by the pyrolytic acid method were made. The subjects then spent one hour in an improvised gas chamber, a closed sedan into which engine exhaust gas was introduced by means of a hose from the exhaust pipe. The concentration of carbon monoxide in the chamber, determined by the two carbon monoxide indicators used in the survey, was kept constant by admitting small amounts of exhaust gas from time to time to replace that which leaked out gradually. At the end of the period of exposure, blood samples were again tested, and driving tests were repeated. It was found that exposure to the gas had very little effect on blood pressure, pulse rate, steering ability, visual acuity, field of vision, color vision, depth perception, speed estimation or glare resistance.

The blood saturation readings are not considered reliable, due to inaccuracies in color standards which were not discovered until after the tests were made. However, they suggest that carbon monoxide when inhaled in small amounts day after day has a cumulative effect, and is not completely eliminated from the body in a few hours after exposure, as is commonly believed. Further tests along this line have been planned for the near future.

Braking time represents the interval, in hundredths of a second, elapsing between the appearance of a red light and the application of the brake by the subject, seated behind a set of standard automobile controls, following a moving road scene by manipulating the steering wheel. It was found that the inhalation of an amount of carbon monoxide considered equivalent to that breathed by the driver of a vehicle containing 100 parts per million of the gas during a six to nine hour driving period caused a diminution in driving ability as indicated by headache, muscular weakness and tremors, mental confusion, and a small but definite lengthening of braking time. It is believed that this effect is greatly increased by fatigue such as is experienced by drivers of motor vehicles, particularly heavy trucks or similar vehicles. Plans are being made to conduct further tests under conditions more closely approximating actual driving conditions in order to minimize the learning factor and to include the fatigue factor in combination with exposure to carbon monoxide.

Following are the conclusions reached by Doctor Russell as a result of this preliminary survey:

It is believed that many otherwise unexplained highway accidents, in which experienced drivers, traveling along a straight highway in broad daylight after a good night's rest, run off the road or crash head-on into an approaching vehicle, are due to the driver unknowingly breathing dangerous amounts of exhaust gases escaping from defects in the exhaust system of the vehicle he is operating.

In the absence of defects in the exhaust system, it is believed that there is little danger of carbon monoxide poisoning from engine exhaust gases while driving along the highway.

The exhaust systems of motor vehicles should be inspected carefully, and periodically, for any defects which permit the escape of exhaust gases before reaching the exhaust pipe outlet.

Such defects should be corrected immediately to protect the driver from exposure to dangerous concentrations of carbon monoxide in the escaping gases.

Drivers' compartments of motor vehicles should be fitted with tight floor mats to exclude exhaust gases which may enter through cracks around floor boards. Openings in the dash should be closed as tightly as possible.

TWENTY-FIVE YEARS AGO[†]
EXCERPTS FROM OUR STATE MEDICAL JOURNAL
Vol. XI, No. 8, August, 1913

From Some Editorial Notes:

Ethical Proprietary and "Patent Medicine" All in One.—The favorite way—because the most economical—of introducing a nostrum to the public, is first to exploit it to the medical profession. This was the plan used abroad in introducing "—," the orange-flower flavored syrup of potassium guaiacol sulphonate, the essential constituent of which, the potassium guaiacol sulphonate, had first been popularized to the medical profession under the name, "—."

The College.—The JOURNAL has been asked by a number of our readers to give some serious information in regard to the proposed "College of Surgeons" and the method of its forming. It grew out of the clinical congress of surgery held in New York last year. These clinical congresses were started by Doctor Martin, editor of *Surgery, Gynecology and Obstetrics*, and a large number of doctors attended them, as clinics are always attractive and some of the most prominent surgeons in the country participated. The idea of forming a "college of surgeons" was sprung at the New York congress, and met with the approval of the mob of those in attendance. It is said that a corporation was then formed, of which Murphy and Martin were two of the five directors, and the proposed name was thus legalized. The scheme was talked over all over the country quite naturally and a meeting was called to take place in Washington in May. . . .

Preaching Advertising Honesty.—A most significant feature of the annual convention of the advertising men of the country, recently held in an eastern city, was the fact that on a Sunday a member of the Ad Association appeared, on invitation, in nearly every church in the city, and delivered an address in the nature of a prayer for honesty in advertising. Little over ten years ago the STATE JOURNAL began its existence with the statement that it would, so far as humanly possible, accept only honest advertisements and would be responsible to its patrons for the character of the advertising. It was the only publication in the United States to take that stand and a lot of people laughed at us for doing it. . . .

From an Original Article on "Gall-Tract Disease—Some Clinical Features Frequently Overlooked in Its Diagnosis," by C. M. Cooper, M.D., San Francisco.—Gall bladder or gall duct colic is essentially epigastric in origin and radiates upwards. With a stone in the cystic duct, the intense pain may be referred to the right of the lower dorsal vertebrae, and since a block in the cystic duct does not cause jaundice, the colic may be wrongly considered of renal origin. When the pain is epigastric, it may occasionally radiate to the legs or to the left arm. . . .

From an Original Article on "Surgical Treatment of Gall Bladder Disease," by Wallace I. Terry, M.D., San Francisco.—One need not look far back in medical literature to learn that gall bladder operations were infrequent almost up to the beginning of this century. The foundation work laid by Courvoisier, Kocher, Langenbuch, Bobbs, Sims, Riedel, McBurney and others attracted more or less attention, but the realization of the importance of gall bladder surgery came from the publication by Kehr, of Halberstadt, of some four hundred operations on the gall bladder and bile ducts. Later Mayo Robson and the Mayos reported large numbers of operations, and the various manipulative procedures were put on a firm basis. . . .

(Continued in Front Advertising Section, Page 15)

[†] This column strives to mirror the work and aims of colleagues who bore the brunt of Association activities some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA[†]

By CHARLES B. PINKHAM, M.D.
Secretary-Treasurer

Board Proceedings

At a regular meeting of the Board of Medical Examiners held in Native Sons Hall, San Francisco, June 27 to 30, approximately 198 applicants took the examinations, including physicians and surgeons, drugless practitioners and chiropodists.

The legal calendar was unusually large and the following judgments were rendered by the Board:

Archibald E. Amsbaugh, M.D., San Francisco, charged with aiding and abetting, was on June 29, 1938, found guilty and placed on probation for a period of five years, during which time he shall abide by all the laws of the State of California and the United States and report at each San Francisco meeting during the period of his probation.

Robert V. Baker, M.D., Los Angeles, charged with violation of the terms of his probation, was on June 29, 1938, found guilty and his license to practice in the State of California was revoked.

Harvey J. Bosse, D.S.C. (chiropodist), San Francisco, cited on the basis of record of conviction, was found guilty and on June 30, 1938, his license to practice was revoked.

Mahlon C. Cooley, M.D., Los Angeles, cited on record of conviction in connection with the ambulance chasing-insurance fraud, was on June 30, 1938, found guilty and his license to practice in California was revoked.

Morris A. S. Frank, M.D., San Francisco, found guilty October 20, 1937, on narcotic dereliction, was on June 30, 1938, placed on probation for a period of five years, without narcotic privileges.

George Wellington Frasier, M.D., Pine Knot, cited for violation of the terms of his probation, was found guilty and on June 28, 1938, his license to practice was revoked.

Cary D. Frederick, M.D., Los Angeles, cited in connection with the ambulance chasing-insurance fraud trials, was found guilty and on June 28, 1938, placed on probation for a period of five years.

Albert B. Gray, M. D., Dorris, cited for aiding and abetting, was found guilty and on June 29, 1938, he was placed on five years' probation, during which he is prohibited from practicing from December 15, 1938, to March 15, 1939.

William B. Humphrey, M.D., Los Angeles, cited on record of conviction in connection with the Los Angeles insurance fraud cases, was found guilty and on June 30, 1938, his license to practice in this State was revoked.

Louis Kameny, M.D., Oakland, cited on record of conviction of insurance fraud, found guilty and on June 30, 1938, his license to practice in this State was revoked.

Albert B. Liddell, M.D., Los Angeles, cited in connection with the ambulance chasing-insurance fraud, found guilty and placed on probation on June 28, 1938, for a period of five years.

James E. McCue, M.D., San Francisco, cited on the use of fictitious name (Unipathic), was on June 30, 1938, found guilty and placed on probation for a period of five years, with the further penalty that from July 15, 1938, to January 15, 1939, he shall cease practice.

Thomas P. Moore, M.D., Los Angeles, cited on record of adjudication of insanity, license was on June 30, 1938, revoked.

Benjamin Naidis, M.D., Los Angeles, cited on a charge of aiding and abetting, was on June 29, 1938, found guilty and he was placed on five years' probation, with the further penalty that from July 15 to October 15, 1938, he shall cease the practice of medicine in the State of California.

Allen H. Peek, M.D., cited for violation of the terms of his probation, was on June 27, 1938, found guilty and was placed on probation for one year additional to the probationary period of five years imposed on him February 10, 1937.

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[†] The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.